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PART II



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VII. SOUTHERN TEMPLES:

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1. INTRODUCTION

NAGARJUNAKONDA HAS REVEALED INTERESTING examples of brick temples of the third and fourth centuries dedicated to the Brāhmanical gods, variously with apsidal, square or retangular plans.

¹ For the places mentioned in this chapter, see map, fig. 4, pt. I, p. 190.

The internal use of supporting limestone columns, as in the contemporary and earlier Buddhist structures of the place (above, p. 107), was perhaps a local and limited adaptation of stone in the otherwise brick-and-timber constructions, but the columns too must have carried wooden beams. Two other full-fledged examples of apsidal temples in the region are seen in the modest structures at Chejarla (District Guntur) and Ter (District Osmanabad), both originally Buddhist but later adapted respectively as Siva and Vishnu temples.

The creation of rock-cut cave-temples in south India towards the close of the sixth century (above, p. 141) broke fresh ground in the history of south Indian temple-architecture. The urge to express in the new rock-material soon caught up, with the result that in the wake of the early cave-temples the total aspects of contemporary brick-and-timber temples came to be carved out of entire rocks as monolithic reblicas by the Pallavas (above, p. 147). The Chalukyas, with their experience of quarrying out cavetemples in the evenly-bedded soft sandstone, soon perfected the technique of quarrying, sizing and tooling of large chunks of the material and of building them up into their early structural temples-the mandapa-type as adopted in cave-temples or imitations of the contemporary storeyed brick-and-timber structures

2. UNDER THE EARLY CHĀLUKYAS

A. AIHOLE

The structural experiments of the Early Chāļukyas were confined to their capital Vātāpi (modern Badami), the adjacent Mahakuteshwar and the twin

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cities of Aihole and Patadkal (all in Bijapur District).

At Aihole the typical mandapa-temple is exemplified by the Lad-Khan, Kontgudi and Meguti. The first is a square closed mandana-like structure standing on a moulded adhishthana (basement). The structure is a pillared hall, with a central group of four tall pillars supporting a flat roof surrounded by two peripheral rows of twelve and twenty pillars of lesser and least heights supporting a sloping roof of slabs. Thus the central bay is enclosed by a double aisle. The intercolumnar gaps of the peripheral group at the edges of the basement are closed on all sides by screen-walls of single massive slabs set on edge, except for the entrance in the middle of the eastern side, where the mandapa is preceded by an open mukha-mandapa (pillared porch). The slabs of the three central bays on the south and north are perforated into windows, but those of the central and extreme bays in the hind (west) wall are blank. The central flat-roofed bay of the main mandana has a nandi, while beyond it, on the west, the central bay in the hindmost aisle is formed into a small shrine by walling up on two sides between the inner and outer pillars and partly in front with a carved doorway, the wall and doorway-slabs raised over a moulded adhishthana. This shrine has a sloping pent roof. Over the flat roof of the central bay is built another shrine, its walls made up of massive slabs. The plan and design anticipate similar temples on the west coast, where owing to the heavy rainfall sloping roofs are immensely suitable. In that region, temples of this type have their shrines located in the more or less flat-roofed central bay and are often of the chaturmukha type, with openings on all the four sides, as the Jaina temple at Karkala.

In the Lād-Khān there are many features, such as the massive columns of the cave-temple type intermixed with those with capitals with potikas of the order, the prevalence of the typical Chālu-kyan lāñ-chana (coat of arms) embossed on one of the pillars of the mukha-mandapa, the types of sculpture and the statuary, the designs of the perforated windows and the intercolumnar kakshāsana (stone seats with back-rests) of the ardha-mandapa, which would, among many others, suggest a date for it immediately after the three earlier cave-temples of Badamı (above, p. 132), i.e., early seventh century.

This dating is also supported by the foundationinscription dated A.D. 634 in the Meguti temple. which is the most evolved of this type. It is a Jaina temple having a principal square structure, which is like a closed mandapa on a moulded base, with four central taller pillars walled in between to form the central shrine, closed by peripheral walls on the east, south and west, and one on either side of an entrance in the middle on the north. While the central shrine occupies the larger central space of the nine square bays, two lateral shrines occupy the two hind corner bays, thus leaving a passage between them and in the rear of the central shrine. The three front bays form a rectangular ardhamandana for the three shrines, while the two on either side of the central shrine form a sort of antarala in front of the two side-shrines. The central bay of the ardha-mandapa has four pillars carrying the roof, which is flat, as is the one over the central shrine, while the rest is sloping from centre to the top of the outer walls. The outer walls are relieved four times with three recesses, with pilasters and other members. The relieved parts carry deva-koshthas (niches), and the two extreme recesses on the east

UNDER THE EARLY CHÂLUKYAS

and west, as also the two flanking the ardha-mandapa entrance, have perforated windows. A smaller mukha-mandapa on the same adhisṭhāna is coeval, but a large open mandapa is a late addition. On the top of the central shrine-roof was added another shrine open to the sky in later times.

The Kontgudi complex consists of three temples, two of them facing each other, with a tall open mandapa occupying the open space between them. The third stands to the south of the first and likewise has its shrine-cell at the rear. The mandapa temple

has a shrine at its centre.

The Durgā temple is essentially of the southern type, with a later northern type superstructure imposed upon it-an incongruity apparent from the fact that the superstructure is a square structure clumsily fitted over an apsidal cella. The temple stands on a high moulded upapītha (sub-base), apsidal on plan and carryng a peripheral row of columns on its edge that surround the moulded adhishthana and walls of an apsidal vimana and its front mandapa. Thus the colonnade forms a covered circumambulatory with a sloping roof. The open mandapa is continued forward on a base of smaller width. The peripheral pillars of the front mandana and those at the forward end of the circumambulatory have large statuary on them. The adhishthana inside is again apsidal, moulded with all the components, and carries the apsidal wall enclosing the inner apsidal wall of the cella or garbha-griha and a closed mahā-mandapa in front of it, with two linear rows of four columns in each row that divide it into a central nave and lateral aisles. The central nave has a higher flat roof raised over a sort of clerestory in front of the cella-entrance, and two lateral aisles have sloping roofs, at a lesser height than the central

roof. The aisles of the mahā-mandapa are continuous on either side, with a closed inner circumambulatory between the inner and outer walls of the cella, which again has a sloping roof. The adhishthana of the apse is projected forward into the porchlike front mandana of a lesser width with four pillars in two rows. The reliefs on the adhishthana and outer wall are cantoned by pilasters and enclose niches which are framed by shrine-fronts of all the patterns of northern and southern vimanas, kūta, sālā, pañjara, udgama, etc., and contain bold sculpture. The four recesses, two each between the three bays on the north and south sides and two more between the three bays round the apse-end, are provided with perforated windows. Over the inner wall of the cella perhaps rose the original apsidal grīvā and śikhara, as in the temples at Ter and Chejarla (above, p. 192), either with a wholly-solid core or supported by props inside. The advanced features of the temple, the variety of evolved shrinefronts displayed in its niches, the style of its sculpture, its diverse corbel-forms and the existence in it of a chute, water-spout and the gargoyle-like pranāla—a late feature—would justify placing the temple in the eighth century. This is also indicated by an inscription of Chalukya Vikramaditya II (733-46) on the ruined gopura at the south-eastern part of the enclosing-wall. The name 'Durga' for the temple is misleading, since it was not dedicated to Durga, and is due to the fact that till the earlier part of the last century the temple formed part of a fortification (durga), probably of the Marathas.

B. BADAMI AND MAHAKUTESHWAR

The early southern vimāna-type of structural temples built by the Chālukyas is exemplified by (1)

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the two temples called the Malegitti-Sivalaya standing on an outer crag in the hills on the northern side of Badami, (2) the Sivalaya higher up on the main hill on the same side, called the upper Sivalaya, (3) the main temple and the extreme southerly one called Mallikāriuna in the Mahākūtesvara group of northern and southern style temples inside an enclosure at Mahakuteshwar in the neighbourhood of Badami, and (4) the temple called Banantigudi on the hill in front of the Mahākūteśvara. Of them, the Mālegitti Sivālava (pl. LIX) is the simplest. axially consisting of a massively-built vimana, composed of large blocks of stone, with a closed mandapa of almost the same width and an open fourpillared porch of lesser width in front, all standing on a common moulded adhishthana. The mandapa carries a hāra (ring of miniature vimānas) made of karna-kūtas at the corners with śālās in between, the rear karna-kūtas forming in common the frontal karna-kūtas over the first tala (storey) of the vimāna behind. The adhishthana and the walls of the mandapa are relieved in consonance with the karna-kūtas and śālās above. The central bays on each side of the closed mandapa, as also its re-entrant front walls flanking the mandapa-entrance, contain niches for sculptures. The recesses on the north and south have perforated windows. The vimāna behind rises in two storeys. Its base and walls are relieved thrice to correspond to the four corner karna-kūtas and central sālās. These reliefs contain plain rectangular niches. The lower storey carries on the top of its prastara (entablature) a hara of karna-kūtas at the corners and śālās in between, the intermediate parts of the hara being decorated by nasikas. The second storey carries a hara of four karna-kūtas. closely adhering to and overtopping the corner

faces of the octagonal grīvā—a feature of early temples. The cardinal faces of the grīvā have nāsikās of equal size. The šikhara is heavy octagonal and dome-shaped, of almost the same width as the grīvā below—again an early feature.

The Bānantigudi is of a similar type, though more plain and simple, with a two-storeyed vimāna, square on plan, and without a śuka-nāsikā. The grīvā and

sikhara are also square.

The main temple of Mahakuteshwar consists of a vimāna, square on plan and with a closed frontal mandapa preceded by an open porch. The garbhagriha has an inner circumambulatory surrounding Externally the vimāna-wall and its adhishthāna are relieved in the centre of each side into bays. the two lateral recesses on the north and south walls perforated windows framed between pilasters carrying a prastara above with a prominent kapota (cornice). While the prastara carries the southern motif of a hara composed of two kūtas and a śālā between the eastern recesses of the north and south walls, the western recesses over the above the windows have the northern motifs of udgamas and āmalakas. The cantoning pilasters at the corners of the walls and the bays have well-developed capital-components of the order. The bays on the walls have niches containing sculptures of Siva. On the top of the first storey are karna-kūtas at the corners and śālās over the bays in between. The adhishthana is widened and extended forward as the base of the larger square mandana with a central relief each on the north and south sides, and two more, one on either side of the entrance in front, enclose niches, again containing sculptures of Siva. The recess on either side of the central reliefs on the north and south have perforated

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windows. The superstructure, now whitewashed, carries an octagonal grīvā and a similar šikhara on the top with nāsikās on the four sides, and closely attached karņa-kūjas at the four corners. The closed maŋdapa is pillared inside. The shrine-doorway, as is usual in all the Chāļukyan examples, is elaborately carved with an overdoor having many moulded components or šākhā. The temple belongs to the seventh century. The Mallikārjuna temple inside the enclosure of the Mahākūţeśvara group is better preserved and is very much of the same type as , the main temple.

The upper Sivalaya within the northern fort at Badami has a vimāna surrounded by a closed circumambulatory, the walls of which are extended forward so as to enclose a pillared mandana with a central nave having a flat roof in front of the vimāna and These aisles and circumambulalateral aisles. tory into which they continue have sloping slabroofs. The external walls surrounding the mandana and the vimāna, as also its adhishthāna, are relieved with alternating bays and recesses to correspond to the kūtas and śālās in the hāra above. The recesses have similar tall pilasters of lesser height, carrying nāsikās on the top, which constitute the corresponding kūdus of the main cornice above. The vimāna rises in four storeys of diminishing squares with prominent cornices—an advanced feature. The grira and sikhara are square, with four nāsikās on their four faces, there being no śuka-nāsikā.

C. PATADKAL

The Sangameśvara, Virūpāksha and Mallikārjuna temples at Patadkal exhibit to a large degree the southerly elements in their vimānas, as crystallized

in the contemporary Pallava temples (below, p. 214). The Saṅgameśvara, the earliest of the three, built by Chāļukya Vijayāditya (697-733), is nearer the Pallava form in that it has no śuka-nāsikā, while the other two, which possess this, are the earliest of the Chāļukyan type and its derivatives possessing this architectural member, as also does the Kailāsa at Ellora (above, p. 151). Both the Saṅgameśvara and the larger Virūpāksha are similar to each other in being square on plan from the base to śikhara. The Virūpāksha, built by the queen of Vikramāditya Il (733-46), is the earliest dated temple with the śuka-nāsikā, being closely followed by the Mallikārjuna, built by another queen of the same kins.

The main vimāna of the Sangamevsara is of three storeys. The lowermost storey is surrounded by two walls, the inner and outer, the second storey being an upward projection of the inner wall, while the outer wall encloses the covered circumambulatory round the sanctum. The latter further extends forward to enclose an ardha-mandana and widens out over the same moulded adhishthana to form a closed mahā-mandapa with four rows of five pillars each. An open pillared porch is attached to the middle of the northern side of the mahā-mandapa. The exterior wall also contains a series of niches containing sculptures of a varied iconography. The prastara over the outer wall of the vimana carries a hara of karnakūtas and śālās corresponding to the relieved parts of the wall and adhishthana below, which encloses inside an open circumambulatory round the second storey over the roof of the lower one. At the centre of each side the hara is pierced by projecting waterspouts, and over them the hara-part carries incipient panjaras, perhaps the first appearance of this third characteristic member of the hara of the southern

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temples and the earliest in the Chālukyan series. The second storey also carries a hara of four karnakūtas at the corners and four bhadra-śālās on the relieved centres of each side. The third storey carries only four cardinal bhadra-śālās over the middle of the four sides, coming in front of the cardinal nāsikās of the square grīvā and śikhara that The absence of karna-kūtas of the rise behind. hara-the first step towards the elimination of the hāra itself-and the placement of the respective vāhanas (vehicles) or lānchhanas (symbol) of the main deity enshrined in the garbha-griha below at the four corners on the roof of the topmost storey round the grīvā became an invariable characteristic of the later temples. The Sangamesvara marks another landmark, viz., the insertion of two side-shrines at the two ends of the ardha-mandapa on either side of the entrance to the cella dedicated to Durga and Ganapati.

The Virūpāksha (pl. LX) is a large complex consisting of a tall vimana with axial mandapas and peripheral sub-shrines round the court, enclosed by a wall with gopura-entrances in front and behind. all designed and completed at one time. As such, this is the earliest extant temple-complex in the Chālukvan series. The massive gopuras are also the earliest. The parivārālavas (sub-shrines) are twostoreved and are of the kūta-or śālā-type, originally thirtytwo in number. The axial structures consist of the tall vimāna of four storeys, square on plan from the base to the śikhara, the lowermost doublewalled storey as usual enclosing a closed circumambulatory. The outer wall, with its adhishthana, is externally thrown into five bays with four intervening recesses on each side; the cardinal bays at the centre of each side are the widest corresponding

to the bhadra-śālās over the prastara above, the corner ones middling, corresponding to the karnakūtas, and the intermediary ones, least in width, corresponding to the pañjaras over the prastara. The mandapa is a multi-pillared hall, with its massive pillars richly sculptured, and there are three open pillared porches projected from the centre of the three sides of the mandapa, east, north and south. The sālās over the north, south and east entrances of the mandana have an additional storey, thus raising them over the general height of the hara and making them simulate inner gopuras of a lesser order. The relieved bays cantoned by pilasters with capitals of the order enclose niches inside kūta-, pañiara- or toranaframes, while the recesses have variously either niches or perforated windows. The ardha-mandapa has the Durga and Ganesa shrines at either end inside. The second storey is an upward extension of the inner wall of the storey below, its front projected as the base of the śuka-nāsikā. On the top it carries a hara of four karna-kūtas at the four corners and three bhadra-śālās on the three sides except on the śukanāsikā front. The third storey, a smaller square and of a shorter height, has relieved walls and repeats the same scheme of karna-kūtas and bhadra-śālās on three sides, its front projected into the second storey of the tiered śuka-nāsikā, which in design is of the form of a multi-storeyed apsidal shrine, with appropriate front. The fourth storey, still smaller, carries only four karna-kūtas at the corners, revealing the square grīvā and basal part of the square sikhara with their cardinal nāsikās to full view, and is projected on the front to form the top śikhara with arched front of the śuka-nāsikā. The compoundwall of the complex, following the plan of the group itself, has on its coping kūta- and śālā-heads,

UNDER THE EARLY CHĀĻUKYAS

suggestive of a derivation from the Shore-temple at Mahabalipuram (below, p. 215)—a device which gives the impression of a lower storey when viewed from a distance.

The Mallikārjuna, built immediately after and close to the Virūpāksha, is a smaller temple with four-storeyed vimāna with a circular grīvā and šikhara. It has more or less a similar plan, with a prominent šuka-nāsikā projected over the top of the ardha-mandapa, from the front of the second, third and fourth storeys of the vimāna. The topmost storey does not carry a hāra of either kūṭas or šālās, thus exposing to full view the well-formed circular grīvā and šikhara with their cardinal nāsikās.

3. UNDER THE EASTERN CHĀLUKYAS

A collateral branch of the Chāļukyas, called the Eastern Chāļukyas, ruled over the coastal Āndhra region with their capital at Vengi. Among their structural temples, those at Biccavolu in East Godavari District and Pondugala in Guntur District are characteristic.

The group of temples at Biccavolu form a series dating from about the beginning of the ninth century to the first half of the eleventh. Of them three ruined temples, two respectively called Kansaragudi and Nakkalagudi and the third without a name, all on the outskirts of the village, form the earlier group (circa 850-950), perhaps of the time of Guṇaga Vijayāditya (848-91) and his successors. They conform closely to the main southern tradition of the Pallavas and are three-storeyed vimānas, square from the base to the sikhara, the two lower storeys carrying four karņa-kūtas and four bhadra-śalāts.

The poñjara and śuka-nāsikā are absent, which would place these temples nearer the Pallava cognates and derivatives. The pilasters are tetragonal as in all early temples, with full capitals of the order. The kūdus or nāsikās in the fiexed cornices are horseshoe-shaped, as in the Pallava and Early Chālukyan forms, and the pronounced makara-torana aspect is emphasized in detail with a pair of additional makara-heads above on either side of the finial.

The three other temples inside the village, the Golingesvara, Chandraśekhara and Rājarājesvara, belong to the second group, built a century later (circa 950-1050); the Rājarājesvara was named perhaps after Rājarāja Narendra (1019-60). They are also three-storeyed vimānas, square from the base to the sikhara, but their superstructures are either entirely or partially restored especially in the regions of the grivā and sikhara. They are also plastered over, so that many of their finer details are obscured, though it is seen that the Golingeśvara contained some interesting sculpture.

UNDER THE RĀSHTRAKŪŢAS

Of the structural temples of the Rāshtrakūjas in the area of the Early Chālukyas, whom they ousted in the last quarter of the eighth century and whose architectural traditions they inherited, the one on the outskirts of the temple-city of Patadkal (above, p. 193) is interesting. It is essentially a three-storeyed vimāna, square on plan from the base to the sikhara, the ground storey containing the principal garbhagriha, being double-walled as usual with a closed circumambulatory between the two walls. The

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kūdu-motifs on the cornice-tier of the adhishthāna. and higher up have lost their original nāsikā-shape and become flat triangular reliefs, the precursor of the 'dentil'-reliefs of the Later Chalukvan and Hovsala temples. Likewise, the capital-members have changed from their robust shapes into more conventional forms characteristic of the Later Chalukvan derivatives. The navaranga of the lower connected with it by a short antarāla, shows on its walls seven bays alternating with six recesses adorned with nāsikā-forms containing seated Jinas and other figures. The prastara carries a hara of kūtas, śālās and pañjaras. Rising over the roof-level, the inner wall of the main cella forms a second functional storey, enclosing a sanctum surrounded by an open circumambulatory behind the hara over the lower storey. In front its entrance is masked by the basal part of the projected śuka-nāsikā that extended over the roof of the antarāla below, forming the upper vestibule for this shrine. The second storey carries on its top four karna-kūtas and three bhadra-śālās. the front one absent because of the śuka-nāsikā. The third storey, of lesser width, is relieved in the centre of each face, except on the east or śuka-nāsikā face. These contain udgama-motifs as in northern temples. The square śikhara, following the same scheme of reliefs, simulates a twelve-ribbed member. In front of the navaranga is the open multi-pillared mukhamandapa, the peripheral pillars having the usual kakshāsana between them. Except the two innermost pillars of the peripheral series abutting on the navaranga-front, all others as well as the four central ones, though in sandstone, are partially lathe-turned, heralding the more completely lathe-turned pillars of chloritic schist or steatite of the Later Chālukvas and their successors.

UNDER THE WESTERN (LATER) CHĀĻUKYAS

With the coming back to power of the Chalukyas, also known as the Western or Later Chālukyas, in their home-country towards the close of the century, now with Kalyana as their capital, the original traditions were continued, with a gradual introduction of significant modifications of the essentially southern type of vimāna. The sandstone temples of the Navalinga group and the slightly later Kallesvara at Kukkanur near Gadag (District Dharwar) would perhaps mark the end of the sandstone tradition of the Eastern Chalukvas and Rashtrakutas. before the Western Chālukyas adopted the chloritic schist. The Navalinga is a cluster of nine twoor three-storeved small vimānas, square on plan from the base to the sikhara, built round the sides of a linear row of three mandapas, with a fourth mandapa near the group. They retain many characters of their archetypes in pilasters, prastara and other parts. The top storey is devoid of the hara and, but for the śuka-nāsikās, they recall the Eastern Chālukvan examples at Biccavolu. The pillars of the mandapa are partially lathe-turned. The sikhara has a splayed out thin brim, its sides are offset and the kūduarches retain their arched character.

The Kalleśvara has a three-storeyed square vimāna with an antarāla and square closed mandapa in front. The mandapa has four windows, tunnelled into the thickness of the 2-m. thick lateral walls, one on either side of the two niche-like side-shrines inside. The storeys are not boldly marked as in the earlier buildings but are broken up into vertical arrangements of offsets and recesses. The kūdus on the cornices are beginning to lose their

UNDER THE WESTERN CHÂLUKYAS

original bold horseshoe shape and have become flat facets. The square-based pillars inside are partially lathe-turned and show some advance over those in the Navalinga group. The most interesting feature is the smaller blocks of stone used in the construction, which is in contrast with the large-sized stones used in the earlier structures. The temples are of the latter half of the tenth century.

The large Jaina temple, among the many temples at Lakkundi, also near Gadag, is perhaps one of the earliest examples of temples in this area built of a kind of fine-textured chloritic schist as distinct from the hitherto-used sandstone of this region. The new material, because of its less thick quarrysizes and tractability, reacted on the workmanship, with the result that the masonry-courses became reduced in size and the carvings more delicate and highly finished. The temple, perhaps built in the latter half of the eleventh century, has a five-storeyed vimāna, square on plan from the base to the sikhara, and had originally a closed square navaranga in front, though an open mandapa was added in front later on. The central bay of the navaranga is a larger square than the peripheral eight around it. The second storey, as in the Jaina temple at Patadkal, (above, p. 199), is functional and has an antarālamandapa infront over the vestibule of the lower storey. This raises the total height of the vimana considerably. The three upper storeys are symbolic and had the śuka-nāsikā projected in front. The kūdu-ornaments on the cornices, though flat, retain their arched shape and are characterized by simha-mukha (lion-mask) finials. The pilasters on the walls are slender and between pairs of them are tall nāsikā-fronts; in the recesses occur for the first time the 'decorative pilaster'-a pilaster carrying a shrine-pavilion on

the top of its abacus—a characteristic of contemporary Chela temples in the south—framed inside a

torana carried on two flanking pilasters,

The Kāsi-Viśveśvara temple at Lakkundi (pl. LXI) and the Mahadeva temple at Ittagi, not far from Gadag, mark the art in this area at its zenith under the Western Chalukyas. The Iltagi temple was built according to its foundation-inscription in 1112 and was the centre of a complex, all built over a speciallyraised terrace beside an ornamental tank. The main structure, now extant, is a five-storeyed vimana, its grīvā, sikhara and stūpi missing. The entire vimāna is thrown into five bays on each side, the central thrown out the most, with narrower recesses in between and the bays again offset repeatedly, so that the plan is apparently scalloped. There are karna-kūţas at either extreme over the prastara of each side of the storeys with a bhadra-sala at the centre and two pañjaras intervening, one in each recess. Round the cella the most-projected central bays carry broad niches in the form of miniature vimanas, with pillars, prastara and superstructure, while the cantoning faces of the karna-kūtas have narrower elevations of shrines. The adhishthana is elaborately moulded. In front of the vimana, at the ground level and on the forward extension of the same adhishthana, stands a closed navaranga connected to the vimana by an antărala. The central ceiling is raised and is highly ornamented particularly in its corner-slabs. mandana has three entrances, and projected pillared porches which connect it with an open multi-pillared front mandapa, again with projected porches. second, third and fourth vimana-storeys are projected forward over the antarāla into the typical śuka-nāsikā. The excessive decorative elements of the temple, as also the plan and other features, proclaim its

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chronological proximity to the typical temples of the Hoysalas and the Kākatīyas.

6. UNDER THE HOYSALAS

The temples built under the aegis of the Hovsalas of Mysore (twelfth-thirteenth centuries) were also built of a very tractable, dense and fine-grained chloritic schist which lend to fine carving. The temple in general consists of a vimāna. connected by a short antarāla to a closed navaranga, which is often preceded by a mandapa. It is not also unusual for it to have three main vimana (tri-kūta), connected to the three sides by their respective antarālas to a common navaranca which has the front mandana on the fourth side. The whole complex stands on a raised terrace, broad enough to have a wide common circumambulatory. By the repeated offsetting not only of the sides, as in the later Chalukyan examples, but also of the angles, the resulting plan becomes stellate, a configuration which extends from the terrace to the topmost storey. This gives a larger surface-area by the proliferation of facets for the execution of a profuse and rather crowded sculpture. for which the Hoysala temples are noted. prastara has a prominent eaves-like cornice. mandapas have the gaps between their outer pillars closed by perforated or sculptured screens. superstructure is a scheme of close-set haras essentially of kūtas, rising one behind the other and each marking a storey, the topmost carrying a short grīvā and octagonal sikhara terminating into a stūpi. The front of the upper storevs is drawn into a fukanāsikā over the antarāla below. The pillars inside the mandapa have square bases and shafts finely

polished on the lathe and capitals of the order. Often the axial series of structures is surrounded by an open court and closter inside the enclosure-wall that has an entrance only on one side—the mahādvāra.

Of the numerous temples of the Hoysalas, the most well-known are the Hoysaleśvara, among the many temples at Halebid, and the Chenna-Keśava at Belur (both in District Hassan), the two towns being the earlier and later capital-cities of the Hoysalas, and the Keśava temple at Somnathapur (District Mysore).

The Chenna-Keśava temple at Belur was built by Hoysala Vishnuvardhana in 1117, and the name of the consecrated deity was Vijaya-Nārāyaṇa. It is the principal temple in a complex of later temples. all inside a spacious courtyard surrounded by a cloister and compound with a gopura-entrance on the east, now replaced with a modern superstructure. As designed and completed by Vishnuvardhana, it had the vimana of a beautiful stellate plan and superblycarved doorway, with an antalrala connecting it to the navaranga. A few generations later, in the time of Ballala II, who built the compound and the tank at the north-east corner, the mandana was provided with pierced windows between the pillars. peripheral columns of the mandapa, except for the porch-entrances that are fitted with ornate doorways. had a running platform (kakshāsana) inside. The whole stands on an terrace 1.5 m. high, the plan of the circumambulatory following that of the structures that it carried. The adhishthana of the vimana, antarāla and mandapa is profusely carved with long lines of friezes, animal and narrative. The walls carry sculptures of iconographic interest and reliefs of miniature shrines. The bays on the three cardinal projections of the main vimana form smaller

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vimānas with cells inside. The overhanging kapota of the mandana is supported by numerous finely-carved caryatid-like feminine figures in graceful poses, called madanikās. In front of the main doorways of the mandapa on the east, north and south, on either flank of the steps leading from the platform below. are posed two small vimanas, one on either side, with two more on the flanks of the steps leading from the court to the platform. The superstructure of the main vimāna is now lost. The pillars inside are latheturned, and a few of them are intricately carved or carry exquisite sculpture. The raised coffer-like central ceiling rising in eight tiers is also very intricately carved and bears a massive and delicatelywrought pendentive in the centre. The ceiling is supported at the base by bracket-figures even more beautiful than the madanikās outside. The temple is a veritable museum of sculpture, large and small, and intricate vegetal and floral carving.

The Hoysaleśvara (circa 1150), among many other temples at Halebid, is a composite of two similar structures standing side by side on a raised common platform. Each unit, like the Belur temple, consists of a vimana of a star-shaped plan, with an antarāla and navaranga in front, which has cruciform projections on its three sides. The two adjacent inner arms of the crosses are connected to form a common transept linking up the two temples. Externally the intercolumnar spaces of the projected porches are screened by perforated windows above the level of the kakshasana. The pillars inside are lathe-turned, and the central coffered ceilings of the navaranga have their bases supported as it were on beautiful bracket-figures. Externally the walls of the vimana and the connecting transept, as also walls of the mandapas, are covered with large sculptural

reliefs of remarkable fineness, while the mouldings of the adhishthāna are each an elaborate animal or narrative frieze. The superstructure of both the wimānas is lost. The platform, with the same plan as the structures, is a broad open circumambulatory. In front of the whole stand two open pillared nandimandapas and the one in front of the southern vimāna has a shrine behind. The two are unsymmetrical later additions. Though incomplete, the Hoysaleśvara, coming close after the great temple at Belur, marks the climax of Hoysala art and architecture.

The latest in the Hoysala series is the Keśava temple at Somnathpur built in 1268, which, though smaller, is more exquisitely carved. It is a tri-kūta temple (pl. LXII) with three principal vimanas of equal magnitude, complete with the characteristic śuka-nāsikā. Their antarālas open into a common navaranga on its west, north and south sides, the eastern side opening into a larger closed navaranga with fine lathe-turned pillars and elaborately-carved cofferred ceilings of nine different designs, the central one being the most intricately carved. The sides of the navaranga above the level of the kakshāsana inside and over the adhishthana outside are closed by perforated screens inserted between the pillars. plan of the three vimānas is stellate from the base to the sikhara; their walls, with many re-entrant angles, expose the maximum number of facets for larger sculptures with or without framing shrine-motifs. The whole is mounted on the top of a platform of the same plan, with a wide circumambulatory space and two miniature vimanas flanking the flight of steps. The axial series is surrounded by an open court all round, with a peripheral cloister of sixtyfour shrines set in a continuous line. The mandapa at

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entrance behind the main entrance is a multistoreyed rectangular structure, also with latheturned pillars.

7. UNDER THE KĀKATĪYAS

The temple at Hanamkonda (Warangal District). called the Thousand-pillared Temple, is a transition from the Late Chālukvan to the Kākatīva temples of this region. Built in 1162 by king Prataparudra, the main part consists of a triple shrine (tri-kūta) of considerable dimensions, dedicated to Siva. Vishnu and Sūrva, opening into a common mandapa, all standing on a common platform. The mandapa has open corners between the shrines on its three sides. adhishthana, the walls with pilasters and the prastara are repeatedly offset, with the central bay, projected most, carrying a small vimāna with cella. The superstructure is lost in all the three. The pillars of the mandapa are lathe-turned. What is more interesting is the multi-pillared mandapa with about three hundred pillars, all richly carved. Between this and the main structure is interposed a nandimandana.

The ruined temple within the fort at Warangal deserves mention for the elaborate toranas (pl. LXIII) marking its entrances.

The temples at Palampet (Warangal District) form a group of typical Kakatiya monuments. The main temple of the group, built in the beginning of the thirteenth century, stands on a high platform and is enclosed by a massive wall. In front is a nandimandapa. The main vimāna is essentially square on plan from the base to the śikhara, the sides offset into five bays, the central further offset as the most projecting facet and containing a three-tiered replica

in miniature of the main vimāna. The other bays have tall pairs of close-set pilasters carrying on the top a vimāna superstructure of the southern or northern variety alternately. The storeys consist of indistinct haras, where the kūtas are more conspicuous. the griva again being indistinct, and of almost the same width as the square and domical śikhara. The entire superstructure is of brickwork. The vimāna is connected with the navaranga in front by a closed square antarāla or ardha-mandapa. The whole is surrounded by a raised platform with an outer series of thirtytwo pillars and a circumambulatory. On the platform inside are set eight sub-shrines in pairs, adjacent to each corner of the navaranga. The most interesting feature is the array of carvatidlike brackets, rising from the capitals of the pillars and strutting up the beams or projected cornice Twelve of these are almost life-size femior kanota. nine figures with graceful bends of the bodies and the rest are rearing vvālas, their hind legs resting over elephant-heads. The bases of the peripheral pillars of the mandapa are connected up by a balustrade. forming as it were the kakshāsana of the platform inside. Externally these are carved profusely with panels of diverse interest, including mithunas. interior also is replete with sculpture and the ceilings of the bays are ornate. The hara of the first storey is continued over the edge of the mandapa-roof. While the main structure is of a reddish sandstone, the decorations and bracket-figures are of black polished basalt or hornblende.

8. UNDER THE PALLAVAS

In about the last quarter of the seventh century, in the reign of the Pallava king Parameśvarayarman,

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experiments on constructions in stone was started. The shrine of Vedagiriśvara on the top of the hill at Tirukkalukkunram (Chingleput District), of the time of Parameśvaravarman, was originally a dolmenlike construction built of upright gneiss slabs, later encased by moulded stonework externally, with a roof-slab on the top. The inner faces of the slabs contain relief-sculptures, including the characteristic Somāskanda panel. The apsidal temple at Kuram (same District), built also in the time of the same ruler, employs granite slabs laid horizontally to form the mouldings of the adhishthana. the walls above are of upright slabs, set on edge. with a brickwork reinforcement from inside. in the time of his successor Raiasimha (circa 700-28). who was a great builder, many structural temples were built at Mahabalipuram, as also Panamalai (South Arcot District) and his capital Kanchipuram (Chingleput District), employing stones of different kinds and hardness. Granite-gness or charnockite was soon to become the building-material of his successors and the subsequent dynasties that followed in the southernmost parts of south India. as it is in present times also.

The Shore-temple at Mahabalipuram (pl. LXIV), a complex of three shrines with accessory mandapas, is perhaps an early essay of Rajasimha in building a large temple-complex of hard stone. Of the three shrines, the largest called Kshatriyasimhesvara, facing the sea on the east, and the smaller vimāna called Rajasimhesvara, facing west, are both dedicated to Siva and have between them a rectangular vimāna, without superstructure, enshrining recumbent Vishņu, cut out of a low living rock. The axial mandapas with the gopuras are in front of the smaller vimāna, the whole enclosed by a

massive compound-wall. The Kshtriyasimheśvara, standing at a higher level with its own enclosurewall set closer round its vimāna and ardha-mandana bases, is a slightly later addition seawards. The smaller western vimāna is square on plan from the base up to the griva and is three-storeyed with haras of kūtas and śālās over the facade of the ardhamandana and all round over the second storey The third storey rises high and clear off over the hara, carrying in its four corners figures of bhūtas and a tall octagonal grīvā surmounted by a sikhara, all tall and octagonal. The stupi is of polished black basalt. The pilasters on the walls have for their bases rearing lions or vyālas, a characteristic of the time. The four-storeyed eastern vimāna is also likewise square up to the grīvā, the first storey enclosing the shrine over the adhishthana rising high above the surrounding enclosure-wall. The top of this storey has four seated lions at the four corners. while the coping of the enclosure-wall is a hara of kūtas and śālās, with a larger śālā surmounting the seaward opening on the east. The second storey of the vimāna carries a full hāra of four karna-kūtas. four bhadra-śālās and eight pañjaras. The third storev has only four karna-kūtas and four bhadraśālās, while the fourth carries on the top at the corners four seated bhūta-forms with a tall octagonal grīvā and śikhara. The stūpi again is of black basalt. The row of kūtas and śālās over its enclosurewalls, which continues on the west over the top of the Vishnu shrine produces the semblance of a fivestoreyed vimāna from outside. The usual Somāskanda reliefs are found on the hind walls of both the Siva shrines in addition to fluted lingas of black basalt, installed perhaps slightly later in the same region in the centre on the floor. The sculpture on the

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walls, much inferior to the fine rock-cut reliefs of Mahabalipuram, are large compositions done in situ.

The Tālagiriśvara temple at Panamalai, also built by Rajasimha, is an elegant construction in hard reddish granite. Its square moulded adhishthana, as well as the walls of the first storey enclosing the principal shrine above, are projected much forward on the middle of the sides, the rectangular bay on the east forming part of the antarala, and those on the other sides contain shrines and, like the bay on the eart, carry the large forwardly-set bhadrasālās of the hāra above, while the karna-kūtas occupy the four corners of the main square. The second and third storeys of the four-storeyed vimana repeat the same plan of the bays on the cardinal sides carrying four bhadra-śālas with karna-kūtas at the four corners, while the topmost storey has no hara but four nandis on its four corners. A modern brickand-stucco grīvā and śikhara replace the octagonal stone originals as does the metal stupi on the top. The rear wall of the sanctum has a Somaskanda relief much higher above the horizontal middle line, suggesting the original design of a simultaneous installation of a linga in the centre of the floor and the necessity therefore of keeping the panel clear above it. The inner walls of the ardha-mandapa has large reliefs of Brahma and Vishnu. The northern outer shrine contains remnants of Pallava mural painting depicting Siva in tandava with Parvati.

The Kailāsanātha temple-complex at Kanchi (pl. LXV), also built by Rājasimha and his son Mahendravarman, is built of coarse sandstone, incorporating gneiss-slabs in the top and bottom courses of the adhishṭhāna. The main vimāna, Rājasimhe-śvara (now called Kailāsanātha), is a four-storeyed and essentially square structure up to the grīvā.

which and the sikhara above are octagonal. The moulded adhishthana and the outer walls of the first storey are not only prominently relieved into four rectangular bays on the four cardinal sides as in the Panamalaı temple, but also disposed as four square bays at the four corners, in consonance with the four bhadra-śālās and four karna-kūtas of the hara above. While the eastern rectangular bay forms the antarāla, the others form attached two-storeved vimānas with cella inside the lower storey enshrining large relief-sculptures on their walls. The inner wall of the garbha-griha is plain and square. The second storey rises over the corbelled slabs forming the ceiling over the closed circumambulatory that bridge the space between the tops of the outer and inner walls. While the panjaras are absent over the first storey, their place being taken up by smaller intermediary śālās, the second storey carries full hāras with kūtas, śālās and pañjaras-two-storeyed miniature vimānas of the respective type. The third storey has again a hara of kutas and śalas, while the fourth carries only four nandis at the four corners. The cantoning pilasters of the outer wall of the vimana round the sanctum have the characteristic rearing lion-bases, as also the corner pillars of the detached mandapa in front. The whole is surrounded by a compound-wall enclosing an open court inside The large opening is occupied by a large rectangular two-storeved śālā-type vimāna, the Mahendravarmeśvara, built by the son, with its gopurani-like ardha-mandapa. Both its storeys are devoid of the hara. The western opening is a real but small gopura. All round the inner face of the compound-wall is built an array of fiftyeight small vimanas mostly of the kūta type, variously containing group-sculptures of Brahma and Vishnu, paintings or

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sculptures of Somaskanda. The external walls of these smaller vimānas as also the recesses between them are filled with relief-sculpture adding to the profusion of similar sculpture on the walls of the two main vimānas, thus making the complex a veritable museum of iconography and plastic art. The Mahendravarmeśvara has a smaller enclosure with a gopura in front and lateral entrances in addition near the two front corners. Internally there are two lateral rectangular shrines in the centre on north and south, all a subsequent addition within Pallava times. In front of the whole complex stands a row of eight small vimānas, independent memorials of the square kūta-type with octagonal grīvā and śikhara. All of them contain bas-relief Somāskanda panels on their hind walls, as do the two principal shrines, where in addition there are fluted lineas installed on the floor.

The Vaikuntha-perumāl tempte built by Nandivarman Pallavamalla, also at Kanchi, is dedicated to Vishnu. It is another large structure built of sandstone, with an admixture of granite in the top and bottom courses of the adhishthana. It has a square four-storeyed vimāna, with all the storeys except the top one functional and containing three superposed garbha-grihas, to enshrine the three poses of Vishnu -standing, sitting and reclining. This has been achieved by a system of three concentric walls, forming three concentric squares on the top of a moulded adhishthana, the innermost wall rising to the height of the three storeys and enclosing the three tiers of cells. The intermediate wall rises to the roof-level of the second storey, while the outermost rises to that of the first. The first storey has its cella surrounded by two closed circumambulatories: the outer one functions as

while the inner one provides for two flights of steps, one on either side from the rear, giving access to the single closed circumambulatory round the sanctum of the second storey. The open outer ambulatory of the second floor is surrounded by a balustrade formed by the hara of kūtas, sālās and pañiaras. The intermediate wall extending up to the ceiling-level of the second storey and enclosing the closed circumambulatory round it carries on the top a similar hāra, forming the parapet edging the open circumambulatory round the third storey. The fourth storey, a slightly smaller square, is closed on all sides and carries the octagonal griva and sikhara, now much plastered, and a metal stupi on top. The lowermost storey and the ardha-mandapa in front are surrounded by a narrow open court at the level of the base of the adhishthana, the whole again surrounded by a pillared cloister. The wall of this cloister carries on the top a hara of kūtas and śālās at a level slightly lower than that of the first storey, so that when viewed from outside, the whole simulates in appearance a five-storeyed vimāna. This is the structural prototype, with one more storey added, of the monclithic copy seen in the Dharamraja-ratha (above, p. 149). In addition to the numerous sculptures on the bayed walls of the storeys and the mandapa in front and contemporary inscriptions, the most interesting content of this temple is a series of panelled sculptures narrating the history of the Pallavas from their legendary ancestors down to the rule of Nandivarman II Pallayamalla.

The Mukanda-Nayanār temple at Mahabalipuram is a plainer structure in hard stone, square and two-storeyed, with an octagonal grivā and sikhara and a plain ardha-mandāpa in front. The hāra over the first storey, which extended over the top of the ardha-mandapa, is partly lost, as also the

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upper parts of the *śikhara*. There is a Somāskanda panel inside the shrine on the back wall, and the pilasters on the walls are simple with crude capitals.

The other interesting temples belonging to this period are the Mukteśvara and Mātangeśvara, Airāvateśvara, Vālīśvara, Iravātanśvara and Piravātaneśvara, all at Kanchi, built mainly of sandstone with granite slabs forming the base and top of the adhishthana, and the Olakkannesvara on the top of the hill at Mahabalipuram, built of a grevish-white soft stone. All are composite varieties of a square vimana with a varying number of storeys, where the upper storevs are non-functional and are closely girt by a hara over the storey below and with different plans of the sikhara and grīvā. The Iravātanesvara and Tripurantakeśvara are two-storeved, square throughout, including the grīvā and śikhara. The Mātangeśvara and Mukteśvara, square in their basal parts and three-storeyed, have a circular grīvā and śikhara. The Piravātaneśvara and Vāliśvara, square in their basal parts and with two and three storeys respectively, have an octagonal griva and sikhara. All of them carry low-relief sculptures on their walls.

But soon after, and perhaps in the first half of the long reign of Nandivarman, temples came to be built entirely of granite blocks, finely moulded, carved and sculptured, as seen in the granite adhishthāna of the brick temple of Vaikuntha-perumāl and Sundaravarada-perumāl at Uttiramerur (Chingleput District), of the time of his successor Dantivarman; in the former the niches were meant to contain stucco figures and in the latter slab-reliefs.

The Virattānešvara temple at Tiruttani (Chingleput District) is a very good example of a singlestoreyed vimāna, square in its garbha-griha part and carrying an apsidal grīvā and sikhara. It was built

of hard black stone in the ninth century in the time of Pallava Aparājitaraman, one of the last rulers of the dynasty. It contains some good bas-reliefs fitted into its wall-niches and front face of the apsidal sikhara.

The apsidal vimāna in the compound of the Bhaktavatsala temple-complex at Tirukkalukkunram (Chingleput District) is a good example of the same apsidal type, perhaps a little earlier than the Viraṭṭā-neśwara. It is now shorn of its superstructure and is used as the treasury of the present temple.

9. UNDER THE EARLY PĀNDYAS

Following their rock-cut-temples and the single carved-out monolithic vimāna at Kalugumalai (above, p. 153), the Pandyas of the south continued in their homeland their architectural work much in the line of the Pallavas but with a slight admixture of Chāļukyan traits. Though many of their structural temples are referred to in inscriptions in the area round about their capital Madurai, only a few are extant. The series of small all-stone temples, with elegant and simple plan and complete with vimana, ardhamandapa and larger closed mahā-mandapa, at Kaliyapati, Tiruppur and Visalur (Thiruchchirappalli District), are perhaps the early survivals of the Pandyan tradition. They have all square single-storeyed rumānas with simple moulded adhishthāna less than 2 m. square at the base and carrying on the top over the cella a square grīvā and śikhara. They have often eight small and elegant sub-shrines, dedicated to the ancillary deities (ashta-parivāra) inside the enclosure-wall, disposed at the corners and the middle of each side and rear, the last, in the Siva temples, dedicated to nandi coming to occupy a more central

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place in front of the mahā-mandapa and behind the small gopura-entrance. While all the rest are square on plan like the main vimana, that on the middle of the south side, dedicated to the santa-mātrikās, is rectangular of the sala type. The matrikas came to have a fixed position in the temple-plan of the later Pallayas, the Pandyas, the Muttaraiyars and the Early Cholas and their vassals. The cult of Chandesa, as the principal seneschal of a Siva temple, had its beginnings from the time of Rajasimha Pallava and was by now crystallized, so that he occupied an honoured place in the pantheon as one in the ashtaparivara till about A.D. 1000, when, in the time of Chola Rājarāja, he, like nandi of earlier days, came to have a close proximity to the main vimana on its northern side.

The Siva temples at Tiruvāliśvaram and Korkai, both in Tirunelveli District, are best attributed to the Pānḍayas. They are all-stone temples, called karrali in contemporary and later inscriptions. The Tiruvāliśvaram vimāna (900-50) is a fine and elegant structure, noted for its fine relief-sculpture of rare iconography over its prastara and on the faces of its hāra-components. It is two-storeyed and square, with an arāha-maṇḍapa in front, carrying on the top an octagonal grīvā and šikhara, now renovated. This temple perhaps is the first to depict the well-known āṇanda-tāṇḍava form of Siva among its panels. The Akkaśālai temple at Korkai is, on the other hand, a much plainer structure of a later date. It has a single-storeyed vimāna with square grīvā and šikhara.

10. TRANSITION FROM THE PALLAVA TO THE CHOLA STYLES

The Muttaraiyars, who held the territory on either side of the Kaveri in Thiruchchirappalli and

Thanjavur Districts, have left, in the wake of their own rock-cut cave-temples in this area (above, p. 147), a few structural temples of stone. An example is the vimāna of the Siva temple at Kiranur (Thiruchchirappalli District) and another perhaps a larger and more interesting temple called in a late Pandya inscription Vijayālayachoļīśvaram at Narttamalai near by. The latter was built, according to its foundationinscription, by a chief called Sattanpūdi and repaired soon after by another chief, when it was destroyed by a strike of lightning. Perhaps it then got its name after the founder of the Imperial Chola line of Thaniavur (circa A.D. 850). It is a threestoreved vimana with a closed ardha-mandapa of peculiar plan, standing on the slopes of a hill, surrounded by asthta-parivara vimanas, all square on plan except the one on the south for the saptamātrikās, which is rectangular, and with a small gopura-entrance near the north-east corner of the enclosure-wall. The first storey of the vimana has a double wall, the outer square and plain but relieved at intervals and adorned only by pilasters. over a moulded adhishthana and the inner circular with a circumambulatory in between. The circular garbha-griha opens into the pillared ardha-mandapa. which is a smaller square than the main vimana. Two rows of three pillars each divide the mandapa into a central nave in front of the shrine-entrance and two lateral aisles in continuity with the closed circumambulatory. The mandana is closed on all sides and has its entrance guarded by two dvāra-pālas placed in the niches on either side, enclosed by pilasters. The hara on the square outer wall of the vimana extends over the roof of the mandapa in front, as in the Chalukyan examples, and contains panels of sculpture illustrating dance-poses. The second

PALLAVA-CHOLA TRANSITION

storey, also square on plan, rises over the first storey on four piers built at the corners against the circular wall below and carries a hāra on its top. The third storey is circular, carrying a nandi at each of the four corners and a circular grīvā and circular sikhara in the centre. It is a Pallavas-type vimāna, since it lacks the sūka-nāsikā characteristic of the Chāļukyan. Like the contemporary temples of the Later Pallavas and the Pāndyas, it carries in the southern niche of its grīvā a sculpture of Dakshiṇā-mūrti Siva-which, with others, became an invariable feature of the southern Siva temples.

The Western Gangas, who had their capital at Talkad in the southernmost part of Mysore, have left a few contemporary temples, all in hard stone. much resembling their Pallava compeers, differing from them only in details. The earliest, perhaps of the ninth century, is a group of twin single-storeyed Jaina vimānas on the Chandragiri hill at Sravana-Belgola (Hassan District). Built of granite, they are of small size, about 2 m. square at the base, standing at either end of a rectangular adhishthana, their hind walls extended over the intervening gap and forming a square flat-roofed cell in between. All of them open into a common rectangular ardhamandapa. The grīvā and sikhara of either vimāna are square without a śuka-nāsikā. In front of this structure and closing its ardha-mandapa facade is a perforated soapstone screen of the twelfth century, containing some fine narrative sculpture in miniature panels. A more impressive structure is the Chāvundarāya-basti (circa 982-95), a threestoreved vimana; its two lower storeys are functional and contain two superposed garbha-grihas enshrin-Jaina Tirthankaras. The lower surrounded by a double wall, the outer one continued

forward to enclose a coeval closed mandana in front. preceded by a pillared porch added in Hoysala times. The whole structure stands on a moulded adhisthana. relieved and recessed on plan as are the walls above. The hara over the prastara of the outer wall of the vimāna-part, composed of well-formed kūtas, śālās and pañiaras, is extended over the edge of the mandapa roof, also enclosing a narrow open circumambulatory round the second storey and an open court in front of it. The second storey itself with an open circumambulatory, enclosed by the hara of the first storey, carries in turn a hara of four karna-kūtas and four bhadra-śālās. The third storey, closed on all sides and non-functional, is a smaller square carrying an octagonal grīvā and sikhara with a stūpi as its finial. The mandapa is of the navaranga type. with four polished, but not lathe-turned, central pillars, circular in section, carrying full capitals of the order. The twelve outer ones are of the type found in the cave-temples of the later Pallavas (above, p. 142), square at the base and the top and octagonal in between.

The most interesting monument in the Sravana-Belgola complex is the colossal finely-polished statue of standing Gommațeśvara, carved out of a standing tor of granite on the crest of the Indragiri hill. This was the work of Châvuŋdarāya, the minister of the Ganga king Râchamalla Satyavākya (974-84). Being free-standing, it is even more interesting than the colossus of Ramses II at Abu Simbel, Eygpt, its total height from head to toe being 17.5 metres. The colossus is surrounded by a pillared cloister of granite built by Gangarāja, the minister of Hoysala Vishnuvardhana, while the mandapa abutting the colossus was built by another minister, Baladeva, in the twelfik century.

PALLAVA-CHOLA TRANSITION

The Ganga temple at Kambadhalli, which is not far from Sravana-Belgola, is interesting on account of the fact that the original three vimānas, built of granite and opening into the three sides of the mandapa in tri-kūja fashion, have respectively a square, octagonal and circular grīvā and šikhara. There is an open pillared porch in front of the mandapa on its northern side. To this complex have been added two more lateral vimānas to the front of the porch, connected by a mandapa in between. The whole complex is enclosed by a wall with a small gopura-entrance in front.

The granite temples at Nandi (Kolar District), the capital of the Banas, are of Ganga extraction. The small vimāna called Yoga-Nandīśvara the top of the hill, perhaps the earliest here, is not of much architectural interest. In the large templecomplex at the foot of the hill the two principal vimānas, the Bhoga-Nandiśvara and Arunāchalesvara, standing side by side, are supplemented, by a later complex of axial and peripheral structuresmandapas, cloisters, enclosures and gopuras. Of the two, the Bhoga-Nandiśvara, evidently a renovation in granite of an earlier structure, is more ornate and interesting. The Arunāchaleśvara is almost a copy of the former and later in point of time. Both are connected by a screen-wall of the same period in about the middle of their mandapa-lengths. The Bhoga-Nandiśvara is a three-storeyed vimāna, square from the base to the sikhara, with ardha-mandapa in front. The hara, of fully-formed kūtas, śālās and pañjaras, contains fine sculpture and extends over the roof-edges of both the mandapas. The second storey too carries the characteristic hara and the third nandis of black polished stone at the four corners of its roof and a square grīvā and śikhara,

the niches on the faces of which contain appropriate sculptures in black polished stone.

11. UNDER THE CHOLAS

The Imperial Cholas of Thanjavur succeeded to the hegemony in the south in about the first half of the nunth century after the displacement of the Pallavas and eventually of the Pāndyas. They continued the tradition of temple-building, with many improvements in the technique, use of the hard stones and equally good but more embelished sculpture which became bolder and still later came to be almost in the round. This period marks the peak of temple-building activity, when numerous earlier temples of brick-and-tumber were renovated in stone and more were built at all places hallowed either by the visits of Saiva and Vaishņava saints or in their laudatory hymns.

A typical early Chola temple-unit is the Sundareśvara at Tirukkattalai (Thiruchchirappali District) It is a complete unit built of stone throughout and consists of the main square two-storeyed vimāna with the ardha-mandapa surrounded by the ashtapai viā idaya, all inside an enclosure-wall, with a gopura in front The mandapa in front of the vimāna is a later addition. The temple was built in the time of Āditya I in 873 The main vimāna of the Nāgesvara at Kumbakonam (Thanjavur District) is of the same period and contains exquisite sculpture in its niches. The other parts of the temple belong to later periods.

While these early Chola temples and their contemporaries retain the essentials of the Pallava temples, they also show certain transitional features in some components, e.g., the corbels: in most cases

UNDER THE CHOLAS

the corbels retain the taranga-form with a curved profile but with a hollow moulding in place of the roll at the bend; or alternatively they are plain, angular and bevelled, as in the Pāṇḍya cave-temples (above p. 146).

The Koranganātha temple at Srinivasanallur (Thiruchchirapalli District) is an elegant example of the time of Parāntaka I (907-55). It is a square vimāna with a mandapa in front and contains fine sculpture and rich miniature panels above and below them. Its superstructure, as extant, is of brick.

The great temple in Thanjavur, appropriately called the Brihadisvara (pl. LXVI) or the Raiarajeśvara after its builder Rājarāja I (985-1014), is conceived as a whole complex on a grand scale, completed by its founder and is the most ambitious undertaking of Tamil architecture. It combines all that is mature and best in the temple-building tradition-architecture, sculpture, painting and allied arts. It is a large complex, with an enormous monolithic nandi on a pedestal in front, sheltered under a much later mandana. It has the loftiest known vimāna, 60 m, high, standing over a basal square of about 30 m. side, which forms an appropriately high and amply-moulded platform, and carries the more boldly-moulded adhishthana of the vimana. The same platform and adhishthana are extended forward as basal members of the ardha and mahamandanas connected to the main vimana by a northsouth transept. The pillared mahā-mandapa, with a central nave and two raised aisles, is closed on the sides with the only entrance on the east. The wall of the basal part of the vimāna rises vertically to a height of about 15 m. in two storeys, demarcated horizontally at their junction by a bold cornice, and encloses an inner circumambulatory between it

and the inner wall of the garbha-griha, which also rises to the height of both the storeys to accommodate the colossal linga and its great pedestal.

The outer wall is externally relieved five times on each face, as the adhishthana below, the central wider ones on the north-west and south sides having large door-openings, one over the other, for both storeys of the circumambulatory. These, in addition to the larger opening on the east, make the vimana a chaturmukha structure. The other bays contain niches with different icons in bold relief. The recesses in between are adorned by short pilasters carrying shrine-motifs (panjara-fronts) on the top, the so-called 'decorative pilaster' characteristic of the period. The main pilasters cantoning the corners of the bays and walls are square with full capitals, the abacus as in the earlier Pallava structures, still being large, massive and square, but the corbelarms are bevelled with a central tenon on their faces. The inner wall of the lower storey has on its three sides more than life-size sculptures of Siva seated on the south and dancing on the west and of Devi on the north. The lower closed circumambulatory contains over the rest of the walls on either side extensive mural paintings of the Chola period, overlaid by later Nāyaka palimpsests of the seventeenth century. The Chola paintings form a fine gallery of great artistic merit and iconographic interest. The upper circumambulatory, also closed, contains on the face of its inner wall a series of one hundred and eight panels, all, except the last twentyseven with completed reliefs, depicting Siva in the various poses of dance in accordance with Bharata's Nātva-sāstra.

By a system of corbelling the two walls of the circumambulatory are made to meet each other at

UNDER THE CHOLAS

the top level of the third storey, from which point rises the rest of the pyramidal superstructure of the soaring vimāna of sixteen storeys, the traditional maximum. Each storey carries hāras of kūṭas, śālās and pañjaras and the topmost four nandis at the four corners and an octagonal grīvā in the centre crowned by an octagonal sikhara. On the front side the storeys up to the level of the fifth storey are slightly extended forward over the tiered ardhamandapa below. Internally the vimāna is a corbelled hollow throughout up to the base of the stūpi.

Enclosing the wide open court around is a twotiered compound-wall with pilasters at intervals. the tiers themselves being marked off externally by a bold horizontal kapota. On the eastern side the compound-wall has a massive but short gopuraentrance. Ranged inside the enclosure-wall is a continuous two-storeyed cloister divided by a row of pillars behind the facade-columns into a frontal continuous corridor and a rear section stringing a series of thirtysix two-storeyed sub-shrines. The subshrines at the four corners and the middle of each of the three sides are dedicated to the appropriate dik-nāla, the eighth finding a place in one of the four shrines in the two tiers flanking the inner end of the eastern entrance. In front of the gopura is a second outer and larger gopura incorporated into a later fort-wall. In addition to the inner gopura on the east, the compound-wall is pierced by three more smaller entrances of the torana variety, framed by overdoors with śākhās and crowned by horizontal lintels. Just to the north of the transept is a smaller vimāna of Chandikeśvara adjoining the large gargovle-like water-spout of the main vimana, supported on the head of a squatting bhūta, both of which became characteristic of temples from this

time onwards. These were new norms, perhaps set by Rājarāja. The other vimānas and mandapas nside the court are of later periods, e.g., the Amman shrine to the north of the nandi, which is of the late Chola period, and the Ganesa and Subrahmanya temples on the south-west and north-west, the latter a fine specimen of Nāyaka architecture (below, p. 239).

Apart from sculptures, some of them of immense iconographic interest, paintings and illustrations of dance and music, of which this temple is a unique repository, its long and well-inscribed epigraphs are most interesting and informative of the history of the temple, its builders and donors and the endowments of jewels, bronzes and other parapharnelia.

The Brihadiśvara, begun about 1003 and completed by 1010, is the magnum onus of the Cholas. This was closely followed within about twenty years by another magnificent Chola structure, also called the Brihadiśvara, built almost on the same plan and model by Rajendra I Chola (1012-44), the worthy son and successor of Rajaraja, in his new capital of Gangaikondacholapuram (District Thanjavur), which he founded after his great victories and expeditions to the north up to the Ganga. This templecomplex had only two entrances, a gopura on the east and a plain torana-door on the north. While a great part of the enclosure-wall, the superstructure of the gopura and the entire two-storeved cloister inside were pulled down in the last century to supply stones for the construction of a neighbouring riverdam, the vimāna and its axial mandapa are fortunately extant and intact. The vimana is of lesser height and dimensions, with a lesser number of storeys than that of its predecessor at Thanjavur, but the sculpture, bold and almost cut out in the round, is perhaps of greater excellence.

UNDER THE CHOLAS

The Răjarājeśvara, now called the Airāvateśvara (pl. LXVII) at Darasuram (Thanjavur District), built by Rajaraja II (1146-73), and the Kampahareśvara at Tribhuvanam (same District), built by Kulottunga III (1178-1223), are examples of the great temples of the later Cholas, before the later Pandyas supplanted them by the middle of the thirteenth century. The later Chola and the later Pandya temples, as exemplified by these two, revert to brick-built superstructure over the vimanas and gopuras, while their basal parts, as also the mandapas, axial and peripheral, cloisters and the like, are all of stone. The temples of this and subsequent periods incorporate in their original plan and composition a new and significant addition introduced late in the time of Rajendra I, viz., the Tirukkamakottam or the Amman shrine. Assigned a defined location in the complex, it is a separate vimāna, usually of the śālā type, with mandapas dedicated to Devi, as the divine consort of the principal god, Siva or Vishnu or others as the case may be, the Devi or Amman having a local name in consonance with that of the principal god. From then such Amman shrines have been added to the earlier temples initially without them, e.g., the two Brihadiśvaras. The gopura or temple-entrance, either singly or in a series, in the front, rear and sides of the enclosure-wall, also becomes a major feature in the composition and attains greater dimensions progressively, so that it overtops the vimāna, which from the times of the Pallavas till about 1100 dominated the entire composition. Towards the end of this period, and before the Vijayanagara times, the 'decorative pilaster' adorning the walls of vimanas and gopuras, as in the Brihadīśvara and other temples, came to develop bases of purna-ghatas or full vases of plenty with

excrescent foliage and are called kumbha-pañjaras. The central tenon of the corbel also takes the form of a moulded campanulate pendentive tending to become floral and anticipating the incipient madalai of the pushpa-potika characteristic of Vijayanagara times. The abacus of the pillar-and pilaster-capitals is thinner in contrast to the large square and thick Pallava and early Chola examples. The octagonal grivā and sikhara of the southern style, which among others were more common in Pallava and early Chola times, now become the general norm of the southern temples, though the square and circular styles are occasionally and the ansidal style still more rarely seen.

The Airavatesvara seems to have had originally more than one enclosure, of which the outer ones except for the outermost gopura on the east are now lost. The innermost enclosure with gopura in front, with large parts of the double-storeved cloister inside, is intact. The main axial complex has the same plan as the Brihadiśvara, though of lesser dimensions, but more ornate with hold and round sculpture and miniature narrative panels in relief. The larger sculptures are in a new medium, viz. black polished basalt-like stone, in contrast to the granite of the structure. The main vimana rises in five storeys, the upper ones in brick. The closed mahā-mandapa has in front an agra-mandapa with ornate pillars, open except for the Amman shrine on its north, while on its south is a pillared porch; the whole is designed to simulate a chariot on wheels drawn by elephants.

The Kampahareśvara is very much like the Airāvateśvara including its wheeled porch and its ornate pillars—chitra-kamba. In both the cases, the lowermost hāra extends over the roof of the ardha-mandapa

UNDER THE CHOLAS

as in the Chāļukyan forms. The Amman and Chandikeśvara shrines, again as in the Airāvateśvara, are coeval with the main vimāna. This temple is a veritable gallery of sculptures of varied iconography, including some fine dance-poses. Of the two main gopuras, the inner one and the rear one on the west are ruined on the top, but the outer eastern one is complete and is a tall and fine structure characteristic of the times.

The Sundara-Pāṇdyan gopura to the east of the Jambūkeśvara temple at Thiruchchirappalli is a classical example of a Pāṇdya gopura. Other typical late Chola and Pāṇdya gopuras are seen in the temples at Chidambaram and Tiruvannamalai. These, with the subsequent Vijayanagara and Nāyaka additions, enlarged many of the south Indian temples, which had started in Pallava and early Chola times only with their principal vintānas and mandapas but now grew in size, as instanced by the Raṅganātha temple at the large temple-city of Srirangam (District Thiruchchirappalli), with its seven enclosure-walls and numerous gopuras, mandapas, cloisters and vintānas.

On either bank of the Kaveri in Thiruchchirappalli District, the Irukkuvel chiefs, who were the allies and political subordinates of the early Cholas of Thanjavur, have left a series of interesting allstone temples in their capital-city of Kodumbalur. Of them the Mūvar-kövil is the most interesting from the point of view of architecture and sculpture. It is a complex of three tall granite-built vindnas in a row, all two-storeyed and square on plan from the base to the sikhara, and with stone stigpis and ardha-mandapas in front. The central and southern vindnas are extant, while the remains of the norther are indicated by the moulded adhishhāna. There

were a common but detached rectangular mahāmanḍapa in front and sixteen detached parivārashrines all round, now represented only by their basements. The complex was enclosed inside a wall with a small gopura. The vimānas carry on their walls and niches some of the finest early Chola sculpture.

12. UNDER THE VIJAYANAGARA RULERS

The Vijayanagara empire, which encompassed practically the whole of the peninsula soon after its advent in the middle of the fourteenth century, in the wake of the early Muslim inroads into the south, continued the tradition left by the later Chalukyas, later Cholas and Pandyas. In their northern domains, they inherited the traditions of the Chalukvas as developed till then under the intervening dynasties. while in the south they took up almost from where the later Pandyas had left. Thus, their northern temples in the Deccan and Andhra region retain much that was of the Chalukyan inspiration, while their more southern constructions continued the traits of the Pallava-Chola-Pandya architecture. But at all the places they stuck to the hard-stone tradition, carrying it, as it were, from the south to the Chāļukyan area, which earlier had a predilection for softer stones. In their now-ruined capital at Hampi (District Bellary), there are numerous temples of either variety. Their subsequent capitals and their environs, at Penukonda (Anantapur District), Chandragiri (Chittor District), Vellore (North Arcot District) and numerous other places from the Godavari to Kanniyakumari, contain many more temples, large and small. In fact, their reign witnessed a greater activity in temple-building than

UNDER THE VIJAYANAGARA RULERS

there had been in the times of the Cholas, and some of their temples are remarkable for the great size of their component structures-mandapas and gopuras. The pillars and pilasters have now more elegant shafts, the lower part of the abacus, which was a plain doucene in the Pallava and early Chola periods and got scalloped into petals in the later Chola, develops still more into a floral form with the petals-idal: the corbel or potika has evolved into the characteristic pushpa-potikā, with a double-flexed arm extending from the main block and scalloped at the free-hanging extremity into everted petals with an incipient bud or torus hanging at the centre. The flexed arm has a straight horizontal bar connecting its free tip with the main block. The kumbha-pañjara in all its elaboration becomes another characteristic feature of the Vijayanagara and later temples. The cornice, till now thick and curved down, becomes larger, thinner and with a double flexure extending far forward and often with monolithic stone chains hanging from the corners, as in the kalvana-mandana in the Varadarāja temple at Kanchipuram. Such kalvāna-and other utsava-mandapas are halls for the celebration of temple-festivals, with fine and intricately-worked colonnade, often with attached small pillars or animal and human sculpture the anivottikkal. The Vijayanagara contribution to pre-existing temples was mainly in the form of tall and massive gopuras, called raya-gopuras, some times as many as eleven storeys high, as in the Ekamranatha temple at Kanchi, and in the temples at Tirivannamalai (North Arcot District) and Kalahasti (Chittoor District), built by the great emperor Krishnadeva Rāva (1509-29).

Among the many large Vijayanagara temples at Hampi, such as the Pampāpati and Virūpāksha,

which started from a late Chālukyan nucleus, and the Paṭṭābhirāma, the Hazāra-Rāma and Viṭṭhala, the last two may be taken as examples of wholly Vijayanagara structures, one with Chālukyan traits and the other predominently of the more southern type.

The Hazāra-Rāma temple had probably been begun earlier and was completed by Krishnadeva Rāya. The temple is devoid of the characteristic gopura. The mahā-manḍapa is of the pattern of the Chālukyan navaraṅga, with its four central pillars, though square, polished and embellished with sculpture and carvings. The walls of the main vimāna, as also those of the adjoining Amman shrine and the enclosure, are replete with panel-sculpture. More characteristic is the śuka-nāsikā in front of the superstructure.

The Vitthala temple (pl. LXVIII), a large complex planned and built at one time, is typical of the southern form of vimāna temples with axial additions of mandapas including the agra-mandapa with composite columns and peripheral mandapa, subshrines and gopuras including a Garuda-mandapa in front of the court, which is a vimāna fashioned in the the form of a chariot with stone wheels.

UNDER THE NĀYAKAS

After the fall of the central power the Vijayanagara viceroys in the southern regions, called Nāyakas, assumed independent powers at Gingee, Thanjavur and Madurai in Madras State and Ikker in north-west Mysore. Of these the Madurai and Thanjavur Nāyakas have perhaps contributed more to temple-building and other structural activity than the other two lines. The Nāyakas added elaborate

UNDER THE NATAKAS

mandapas of the hundred-pillared type and larger gopuras with a greater number of plastic stucco figures, as at Vellore (pl. LXIX) and Madurai, their tallest gopura being at Srivilliputtur (Ramanathanuram District). The closed prākāra or ambulatory flanked on either side by massive columns, with elaborately-corbelled brackets spanning the gap above and nearly meeting each other, built in the Navaka and later times, is exemplified by the well-known corridor in the temple at Rameswaram (District Ramanathapuram). The fine kalyana-mandapa at Vellore and a similar mandapa in the northern prākāra of the Srirangam temple (pl. LXX) with the facadecolumns carrying full-size monolithic sculptures of rearing horses with riders and retinue and other animal figures, are the notable contribution of the Nāyakas. Much of the large temple-complex at Madurai is of Nāvaka origin, including the great mandanas and towering gopuras on all the four sides. The Subrahmanya temple, a fine vimāna with ardha-and mahā-mandapas, standing in the north-west of the court of the Brihadiśvara temple at Thanjavur (above, p. 232), is a typical example of the Navaka temple of the ornate variety. Built of fine-grained granite it exhibits in the mouldings of its adhishthana and the pilasters of its wall some intricate and chased work. It has the characteristic pushpa-potika, the kumbha-pañjara and the doubleflexed cornice, in addition to other typical features. These temples form the pattern for the living art of the modern temple-builder or sthapati of south India.

14. THE WEST COAST

The temples of Kerala and the west coast in general, though essentially similar in parts to the

southern temples, are adapted to the high rainfall and make use of the timber which is plentiful in the region. While the adhishthana is built of moulded stone, the walls are mostly of laterite blocks. roof is supported by timber-beams and joists, and the roofing was originally of laminated overlapping, so to say clinker-built, wooden planks; it is this very system that has been imitated in the stone copies where stone slabs are made to overlap one another in the sloping roof, as in the Lad-Khan and other temples at Aihole and the temples of Konkan and Kanara (above, p. 193). While in many other cases the roof is tiled, in still others the roofing was of copper or brass sheeting. The usual plans-square, rectangular, circular and apisdal-are met with, and in simple cases the roof or sikhara comes directly over the walls, without an intervening prastara or grīvā, seen in the Pallava Draupadi-ratha at Mahabalipuram (above, p. 149). Where the vimana is storeyed, the system of concentric walls rising to the respective heights, as is seen in the Dharmarajaratha at Mahabalipuram (p. 149) and the Vaikunthaperumal at Kanchi (p. 219), is adopted, with sloping and not horizontal roofs over the various ambulatories. Alternatively, a system of pent roofs at different heights on the walls, held by brackets sprung from the wall, is followed. The nāsikās (gables or dormers) are generally of a triangular shape, though examples of the vaulted type, with the front masked by a torana-arch locally known as kilivāśal, are also known. Many of the Kerala temples contain interesting mural paintings of the seventeenth to nineteenth centuries.

K. R. SRINIVASAN

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¹For places mentioned in this chapter see map, fig. 5, p. 328.

1 MUSLIM INVASION OF INDIA

COMMERCIAL INTERCOURSE BETWEEN INDIA AND Arabia had existed earlier, but it was early in the eighth century that the Arabs conquered Sind and established some small principalities there. In the closing years of the tenth century Maḥmūd of Ghazmi invaded India for the first time and repeated his expeditions several times, plundering cities and temples, including the famous temple of Somnath in Gujarat. The Raiput rulers of northern India, who opposed him, were all vanquished by him. But during the reign of his successors, not only did India slip out of their hands, but their control over Ghazmi itself became weak and it came under the sway of the princes of Ghūr, a province between Ghazmi and Herat.

In 1175, Muhammad, brother of Ghiyathu'd-Din Sultan of Ghür, invaded Multan and gradually annexed Sind and Panjah, the latter from the descendants of Mahmüd of Ghazni. In 1191 he made a powerful thrust into India, which was repulsed at the famous battle of Taraori by a confederacy of Rajputs under the Chauhān prince Prithvirāja. In the following year, however, Prithvirāja was captured and slain by Muḥammad Ghūrī on the same battle-field.

Muhammad then retired, leaving the campaign in the hands of Qutbu'd-Din Aibak, his favourite slave from Turkestān. Qutbu'd-Din occupied Delhi, Pṛthhvīrāja's capıtal, and soon swept across Kannauj, Gwalior, Gujarat, Bihar, Bengal and Bundelkhand. At the death of Muhammad in 1206, Qutbu'd-Din enthroned humself at Lahore as the first Sultan of Delhi.

INDO-ISLAMIC ARCHITECTURE

2. MAIN FEATURES OF INDO-ISLAMIC ARCHITECTURE

The conquest of India by the Muslims made an effective and distinct impact on the indigenous expressions of life and culture, which gave rise, among other expressions of art, also to a new style in architecture. This style incorporated not only certain new modes and principles of construction but reflected also the religious and social needs of the adherents of Islam.

In the Brahmanical, Buddhist or Jaina constructions, spaces were spanned either by beams or by courses of bricks or stones laid in corbels, so that the open span was gradually reduced to a size which could be covered with a single slab. Although there exists some evidence to suggest that the true arch may have been known in India earlier, it is the Muslims who are believed to have brought with them the principle of building a true arch, so that the bricks or stones could be laid as voussoirs to reproduce a curve and thus span the space between columns or walls. In any case, even if the true arch was familiar to indigenous architects in ancient times, it was re-introduced by the Muslims and firmly implanted on the soil. The result was that flat lintels or corbelled ceilings were replaced by arches or vaults, and the pyramidal roof (pīdhā) or spire (sikhara) by the dome. The necessity of raising a round dome over a square construction introduced multiplication of sides and angles by providing squinches, so that a base with many sides, usually sixteen, could be obtained to raise a circular drum for the dome. A sunshade or balcony was laid on cantilever brackets fixed into and projecting from the walls, which introduced the chhajia (eaves or sunshade). Brackets

with richly-carved pendentives, described as stalactite pendentives, lent them fascinating ornamentation when they were intended to serve as balconies. Kiosks (chhatrīs), tall towers (minārs) and halfdomed double portals are some of the other distinguishing features of Indo-Islamic architecture.

The difference between the lay-out of a temple and a mosque is explained by the essential difference hetween the Hindu and Muslim forms of worship and prayer. A cella to house the image of the deity garbha-griha), and often small halls in front for the worshippers (mandapa), were regarded adequate for a simple Hindu temple. But the Islamic form of worship, with its emphasis on congregational prayer, requires a spacious courtyard (sihn) with a large prayer-hall at its western end. In the rear wall of the prayer-hall, the centre is occupied by a recess or alcove, called mihrāb, and indicates the direction of prayer (qibla). A pulpit (mimbar) to its right is meant for the Imam who leads the prayer. A tower or minaret, originally intended for the mu'azzin to call the faithful to the prayer, later assumed a mere architectural character. A gallery or compartment is sometimes screened off in a corner of the prayerhall or in some other part to accommodate the ladies who observed purdah. The main entrance to a mosque is on the east, and the sides are enclosed by cloisters (liwans). A tank is provided for ablutions usually in the courtvard of a mosque.

The practice of the burial of the dead, as distinct from cremation practised by the Hindus, introduced the tomb. A domed chamber (hujra) with a cenotaph (zarīh) in its centre, a mihrāb in the western wall, and the real grave (qabr) in an underground chamber (maghara) constitute the essential elements of a tomb. In larger and more complex tombs,

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there is also a mosque, and in later tombs a wellplanned garden. The entrance to the mortuarychamber is usually from the south.

The mode, theme or motifs of ornamentation employed in Islamic buildings also made a depart-ture from the earlier Hindu vogues. The indigenous ornamentation is largely naturalistic, delineating with a conspicuous zest human and animal forms and the luxuriant vegetation-life characteristic of a tropical country. Among the Muslims the representation of living beings was forbidden by scriptural injunction, and so they took recourse to execution of geometrical and arabesque patterns, ornamental writing and a formal representation of plant and floral life, reflecting in its scantiness the nature of the country where Islam was born.

Lucidity and simplicity of expression, economic use of material and orderly arrangement characterize the Islamic art, as distinct from the exuberance, richness and exaggeration of Hındu art. The ornamental designs in Islamic buildings were carved on stone in low relief, cut on plaster, gılded, painted or inlaid. Muslim ornamentation even on stone or other base in effect is not much different from embroidery. Striking colour-effect was often obtained by encaustic enamel on tiles.

Lime was known earlier in India, but its use was used for brickwork, while large blocks of stone were generally laid dry, and secured with each other by means of iron clamps. The Muslims, on the other hand, made an extensive use of lime, which served not merely as a binding-medium, but also as plaster and a base for incised decoration and encaustic enamel-work.

After the initial reaction manifesting itself in the desecration, destruction and spoliation of the

earlier Hindu structures the creative monumental activity of the Muslims is marked by two phases. In the first phase, the earlier Hindu temples or other buildings were purposefully demolished and the material used for new improvised buildings. In the later phase, mosques, tombs and other buildings were thoughtfully planned and built with appropriate material, which was originally quarried, manufactured or ornamented as necessary. It is in this phase that Muslim buildings are found at their best.

Indo-Islamic architecture falls under three broad phases. The monuments erected by or under the patronage of the Delhi Sultans belong to the first phase. Contemporaneously, at least in part, monuments were also coming up in the different provinces, which were originally ruled by governors appointed by the Sultans, but which soon declared themselves independent. These exhibit a diversified but distinct phase. To the third phase belong the constructions of the Mughals, who brought India again under an almost united suzerainty.

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From Qutbu'd-Din Aibak's rise till the conquest of India by the Mughals, five main dynasties ruled from Delhi. Rulers of these dynasties raised a large number of buildings, which make it possible to view the development of Islamic architecture in India as a growing and continuous movement.

A. THE MAMLÜK DYNASTY (1206-90)

Most of the important buildings of the Mamlūk (or Slave) dynasty, with the only important exception

of the Arhāi-Din-kā-Jhonprā mosque at Ajmer, were erected at Delhi. In their iconoclastic zeal the Mamlūk conquerors laid the Hindu temples waste, but in spite of their knowledge of their characteristic principles of construction, which were to exercise a farreaching effect in course of time, they were confronted with a lack of workmen familiar with their me-The result is that a sense of uncertainty and improvisation permeates through the buildings of the Slave dynasty, some of which have, in fact, been built with architectural material from demolished Hindu temples. The use of architrave, lintel or corbelled courses continued, and, in fact, the hand of Hindu craftsmen is particularly apparent in surface ornamentation. Although a homogeneous principle of construction and ornamentation is lacking in these buildings, the product is often marked by grace and strength.

In the centre of the Raiput citadel of Lal-Kot at Delhi, which was occupied by Outbu'd-Din, and which with its extension into the later Oal'a Rāi Pithora is known as the first city of Delhi, he demolished twentyseven Hindu and Jaina temples, and with their carved columns, lintels, ceiling-slabs and other members raised regular cloisters to enclose a rectangular area, which was named the Quwwatu'l-Islām ('Might of Islam') mosque and completed in 1197. After a short time he threw a massive stone screen in front of the prayer-chamber along the western wall. This imposing screen with five graceful arches, the central one being the highest, is not built on the true arch principle but by corbelling the successive courses, although there is a faint attempt to lay the stones in the fashion of voussoirs near the apex of the arch. In the ornamentation of this screen with its serpentine tendrils and undulating leaves, the

hand of craftsmen used to Hindu motifs is clearly

perceptible.

An iron pillar, 7:20m. high and 32cm. to 42cm. in circumference, stands in the courtyard of the mosque. It was, however, brought to Lal-Kot, according to bardic tradition, by Anangpal, the Tomar prince who built the citadel. An inscription on it, engraved in characters of the fourth century, proclaims it to be the lofty standard of god Vishnu, erected by a mighty king named Chandra, who is surmised to be Chandragupta II of Gupta dynasty. With only traces of corrosion on the portion covered under the ground, this pillar, manufactured sixteen hundred years ago, is an eloquent tribute to the metallurgists of those days.

In the last year of the twelfth century Qutbu'd-Din laid the foundation of the Qutb-Minār (pl.LXXI), which was finally completed by his son-in-law and eventual successor, Illutinish (1210-35). It was raised possibly both as a tower of victory and as a minār attached to the mosque. Originally the minār had four storeys, the uppermost of which was damaged by lightning in 1378 but was rebuilt by Firūz Shāh Tughluq (1351-88) in two storeys. With its projecting balconies carved with stalactite decoration on the underside, inscriptional surfacecarvings and variegated flutings this 72-5 m. high minār with three hundred and seventy-nine steps, is the highest stone tower in India.

Iltutmish enlarged the Quwwatu'l-Islām mosque by extending the great screen on either side and by extending the great screen on either side and by ratising an enclosure of colonnades outside the original courtyard. The arches of his screen are still trabeate, although their arabesque ornamentation is Saracenic, as distinct from the mixed decoration of Qutbu'd-Din Albak's screen. His tomb, square

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on plan, but with its dome no longer in existence, stands to the north-west of the Quwwatu'l-Islām mosque. It is plain on the outside, but profusely carved with inscriptions and geometrical designs on the inside, recalling the Hindu ideal in its richness.

Another early mosque, built from the dismantled remains of Hindu temples, is at Ajmer. It is known as Aṛhāi-Din-kā-Jhonpṛā, ('thut for two-and-a-half days'), possibly from the fact that a fair used to be held there for two-and-a-half days. It was commenced by Qutbu'd-Din about 1200 and was laid on the same plan as the Quwatu'l-Islām mosque, with carved pillars used in colonnades. Its prayer-chamber, the carved ceiling of which rests on pillars raised in three tiers, is faced by a thick screen carved with effective decoration and prerced by corbelled but engrailed arches, which appear here for the first time (ol. LXXII).

The first example of a monumental Muslim tomb in India, called Sultan Ghārī's tomb, however, lies about four miles west of the Qutb. It was built in 1231 by Iltutmish over the remains of his eldest son and heir-apparent, prince Nāsiru'd-Dīn Maḥmūd, Laid out within a walled enclosure with bastions on corners, which impart it the look of a fortress, its octagonal grave-chamber lies underground, as the level around it was raised by a rubble-packing. ceiling rests on columns raised with two pillars each robbed from an earlier Hindu shrine; carved lintels from another were found embedded in the thick lime-concrete roof. Other pieces were used in the ceilings of the prayer-chamber and bastions and the pillars re-utilised in the verandahs, originally used madrasa, after chipping the decoration off them. The tomb was repaired later by Firuz Shah Tughlug.

Nāsiru'd-Dīn, the last Sultan in Qutbu'd-Dīn's left the affairs of state to Ulugh Khān Balban, originally one of Iltutmish's slaves and now fatherin-law and minister of Nāsiru'd-Dīn. In the absence of an heir, Balban succeeded Nāsiru'd-Dīn in 1266. Balban's tomb, lying not far from the Qutb, is built with rubble stone, and consists of a square chamber with arched openings on all the four sides. It is now without a dome and in a dilapidated condition, but occupies an important position in the development of Indo-Islamic architecture, as we find here for the first time the use of a true arch.

B. THE KHALJĪ DYNASTY (1290-1321)

Firuz Shah, an Afghanized Turk of Khalii tribe at the Delhi court, captured the throne from Shamsu'd-Din Kaimurth, one of Balban's successors, in 1290 and assumed the title of Jalalu'd-Din Khalii. Among the six rulers of Khalji dynasty, the third in the line, 'Alau'd-Din, ascended the throne in 1296 and is well known, not only for his political exploits, but also for his architectural ambitions and achievements. This was just the time when the empire of the Saljuqs in western Asia was breaking up under the incessant inroads of the Mongols, and poets, artists, architects and craftsmen under their employ were taking shelter in neighbouring lands. Some of them, no doubt, resorted to the Delhi court, and brought with them Saljugian architectural tradtions which resulted in such characteristics in Khalji buildings as the 'spear-head' fringe on the underside of the arch, ornamental bosses in relief in spandrels and alternating courses of narrow 'headers' and wide 'stretchers' on the masonry-face. The initial phase of experimentation and improvisation in

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Islamic architecture was now over, and it developed its own methods and idioms. Employment of the true arch, mostly in the form of a pointed horseshoe, broad dome, recessed arches under the squinch, perforated windows, arabesque low reliefs, inscriptional bands and use of red sandstone relieved by marble are some of the other features which characterize Khalii architecture.

'Alau'd-Din extended the Quwwatu'l-Islam mosque in Delhi by enlarging its enclosure of colonnades. He built two gateways on the long eastern side and one each on the north and south, among which only the last one, called the 'Ala'i-Darwaza, has survived in entirety. Here the 'spear-head' fringe on the underside of a horseshoe-shaped arch appeared for the first time and the monotone of red sandstone was relieved by inscribed marble bands. 'Alāu'd-Dīn also commenced building another minar within the northern half of the extended Quwwatu'l-Islam mosque, but he had hardly raised the tower to its first storey. when death overtook him. He had doubled the size of the mosque, and his minar was also intended to be twice the size of the Qutb-Minar. His tomb lies to the south-west of the mosque, along with the remains of a madrasa or college.

In 1303 'Alau'd-Din laid the foundations of Sirl, which was the second city of Delhi, but the first to be originally built by the Muslims. It is now represented only by stretches of its thick stone walls provided with flame-shaped battlements, which

appeared here for the first time.

During 'Alāu'd-Dīn's reign his son Khizr Khān is said to have built the Jamā'at-Khāna-Masjid, which lies close to the tomb of Hazrat Nizāmu'd-Din Auliyā. Its red sandstone facing, low dome, 'spearhead' fringe of arches, recessed squinch arches,

frames of Quranic inscriptions and arrangement of alternating wide and narrow courses are features which are common with the 'Alā'i-Darwāza.

C. THE TUGHLUQ DYNASTY (1321-1414)

The last of the Khaljis, 'Alāu'd-Din's third son, Qutbu'd-Din Mubārak Shāh, was killed by Khusraw Khān, a low caste Hindu convert in Sultan's favour, later appointed by him as his chief minister. Ghāzī Malik, a Turk noble of the Tughluq tribe, who was then governor of Debalpur in Panjab and whose loyalty to his Khalji overlords was unbounded, marched against Khusraw Khān and beheaded him. There being no male survivor from the house of the Khaljis, he was proclaimed king in 1321 under the title of Ghiyāthu'-Din Tuehluo.

Among the eleven rulers of the Tughlua dynasty, who reigned in succession, only the first three were interested in architecture and added a new capital-city each in Delhi. Under the Khaljis Islamic architecture had begun to acquire a standard grace and ornament and a preference for an appropriate use of red colour to relieve the grey, drab surfaces. But with the puritanical Tughlugs the order changed. Their buildings are distinguished by plain and austere surfaces of grey stone, cross-vaults over large halls, battered walls and bastions, the latter particularly on the quoins, four-centred arches and lintels above openings. The battered construction, a necessity in thick walls of mud or bricks (but not in stone), may have been borrowed by the Tughlugs from Sind, Panjab or even Afghanistan, where mud or brick was in use.

The element of reduced ornament in the Tughluq buildings shows them to an advantage. Inscribed

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borders and medallions in spandrels, often executed on plaster or stucco, obtain an extremely effective result. The drab look of the plain mass was further relieved by encaustic tiles, which appear to have been introduced now for the first time.

The Tughlugs were also interested in impounding rain-water for irrigation by erecting bunds and embankments, and some of these have survived to this day. Ghiyathu'd-Din Tughluq (1321-25) built the fortified town of Tughlugābād, the third city of Delhi. With its battered walls of grey rubble perched on desolate hills, where its position gives it a natural advantage, Tughlugābād was raised as a stronghold rather than as an architectural enterprise. It is in two parts, the citadel and palaces along the southern walls forming one unit and the city to the north the other. On plan it is an irregular rectangle with over 6 km, of fortification. The citadel is still intact, and the walls of palaces can also be discerned. The city-portion is, however, in extreme ruins, although one may make out the alignment of some of its streets.

Across the main entrance of Tughluqābād on the south is Ghiyāthu'd-Din's tomb. Faced with red sandstone relieved by marble, and with batter on exterior, it is enclosed within high walls forming an irregular pentagon. With a 'spear-head' fringe on the underside of its arched openings on three sides and its colour-scheme, it still retains some of the characteristics of Khalii architecture. But its arch, with an ogee curve at the apex recalling the 'Tudor' arch, a slightly-pointed 'Tartar' dome and the use of beam-and-arch for openings are new features. Originally it stood within an artificial reservoir and was connected with Tughluqābād by a causeway, now pierced by the Outh-Badarpur

road. The sluice-gates of the vast reservoir are to be seen to the north of the main road close to the massive embankment between the northern and

southern spurs of the hills.

Ghiyathu'd-Din's successor, Muhammad Tughluq (1325-51), added the small fortress of 'Adilabādo on the hill south of Tughluqabād, with which it shares the main characteristics of construction. He also raised the fourth city of Delhi, Jahānpanāh, which largely comprised a walled enclosure between Qal'a Rāi Pithora and Siri in order to afford protection to his subjects living there. Only some stretches of these walls are now extant. A unique monument which formed part of Jahānpanāh is a bridge, called Sātpula, consisting of a weir with seven main and four subsidiary arched openings with a tower at each end

Muḥammad is well-known in Indian history for his idiosyncratic move in transferring not merely the capital but also the entire population of Delhi to Daulatabad in the Deccan, which had earlier been known as Devagiri. It is a natural citadel (as it lies on a conical hill), the sides of which were cut steeply in earlier times. Muḥammad constructed two ashlar-enclosures of defences here, one within another, with the Devagiri hill on the north-west serving as a citadel and the innermost enclosure.

After Muhammad came Firūz Shāh (1351-88), who was fond of history, hunting, irrigation and architecture. He founded the towns of Hissar, Fatehabad, Jaunpur and Firuzpur (near Budaun). In and around Delhi, apart from raising new buildings, he also repaired old ones, such as Sultan Ghāri's tomb (above, p. 249), Qutb-Minār (p. 248) and Sūraj-Kund, a reservoir near Delhi, built by Hindu kings. Two inscribed stone columns of Aśoka, one from

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Topra near Ambala and the other from Meerut, both undeciphered, were brought by him and erected in Delhi, the former in his new capital and the latter on the ridge near his hunting-palace, popularly known as Pir-Ghaib. Series of low domes over mosques and stone railings around a terrace or open courtyard are some of the new architectural features introduced in his reign.

His new capital, called Firüzabād, the fifth city of Delhi, now known as Kotla Firüz Shāh, is a large enclosure of high walls, which then lay along the river. With an entrance through a barbicaned main gate on the west, it contained palaces, pillared halls, mosques, a pigeon-tower and a bāolī (stepped well) some of which are still in good condition. The main public mosque, Jāmi'-Masjid, has a spacious court-yard, the whole structure resting on a series of cells. It is, however, a pyramidal structure with a diminishing covered area in each successive storey, on the top of which, within a stone-railing, the Aśokan column is planted, that strikes as a unique edifice,

Firūz Shāh built several hunting-lodges in and around Delhi, some of which, such as Mālcha-Maḥal, Bhūli-Bhaṭiyāri-kā-Maḥal and Pir-Ghaib,

lie on the ridge.

The Ḥauz-i-'Alā'i, a large reservoir which had been built earlier by 'Alāu' d-Din Khalji to feed his capital Sīrī and which is now in ruins, was restored by Firūz Shāh, and, on its south-western corner, long halls in two storeys, laid to serve as a madrasa or college. This place is now known as Ḥauz-Khāss and includes the tomb of Firūz Shāh, a lofty structure with an impressive dome and a front yard enclosed within stone railings.

During Firūz Shāh's reign several mosques were raised in Delhi. Khān-i-Jahān Jūnān Shāh, son of

a father bearing the same title of Khān-i-Jahān, who was a Hindu convert and became prime minister of Firuz Shah, is credited with having built seven mosques, some of which are Kalan- or Kali-Masjid within the city near Turkman Gate, another Masjid of the same name in Nizamuddin, Kālū-sarāi-Masiid, Khirki-Masjid and Begampuri-Masjid. The mosques in the city and Nizamuddin bear inscription and are definitely built by the son: whether the builder of others is the father or the son is not certain. All these mosques are characterized by eaves or chhajias supported on brackets, series of low domes and sloping minars on corners and at the entrance. The courtvards of the Khirki-Masiid and Kāli-Masjid in Nizamuddin are divided into squares, some of which are roofed and others left uncovered to admit light.

In Nizamuddin also lies the tomb of Khān-I-Jahān Tilangāni, who was perhaps no other than the prime minster of Firūz Shāh himself. The tomb consists of an octagonal chamber coverd by a dome and enclosed by a verandah, each side of which is pierced by three arches. This is the first tomb in this style in Delhi, which later became the hallmark

of the Sayyıd and Lodi architecture.

During the reign of Ghiyāthu'd-Din II (1386-89) was built, near the village of Chiragh-Delhi, the tomb of Shaikh Kabīru'd-Dīn Auliyā, popularly known as Lāl-Gumbad. Its walls have a batter, and it is faced with red sandstone, thus simulating Ghiyāthu'd-Dīn Tughluq's tomb. But its small size, conical dome and other weak features only indicate that it is an inferior copy of its prototype.

After the death of Firuz Shāh Tughluq in 1388, the Sultanate was politically unstable, and each of his successors could retain the throne only for a

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brief period. In 1396, Nusrat Shāh, one of Fitūz Shāh's grandsons, usurped the throne from Maḥmūd Tughluq, although the latter managed to return to the throne in 1399 after Nusrat Shāh's murder. Timūr invaded India in 1398 and plundered and devasted the town of Delhi. He retreated next year, but the country could not recover, with nobles and provincial governors warring against each other and against the Sultan. With this kind of political unstability and the effect of Timūr's invasion, the architectural activities in the country came almost to a dead-stop.

D. THE SAYYID DYNASTY (1414-44)

After Mahmid's death in 1413, the nobles transferred their allegiance to Daulat Khān Lodi, who, however, was attacked and taken prisoner by Khizr Khān, governor of Panjab, in 1414. Khizr Khān sacended the throne and founded the socalled Sayyid dynasty. Four rulers of this dynasty reigned in succession till 1444, but the country knew no prosperity. There was no patronization of arts or architecture. No cities, palaces or mosques were built, as during the rule of earlier dynasties. Only tombs were raised over the dead.

Yet some of these tombs are architecturally important. There were two designs in them, octagonal and square. The former style had made a beginning during the Tughluq period with the tomb of Khān-1-pahān Tilangānī (above, p. 256). The latter came to have a distinct elevation, with the façade divided by a string-course and with series of panels of sunk niches above and below it giving it the semblance of two or three 'storeys'. In these tombs, the central portion of each side projects to

form a vertical rectangle, within which the main arch, with a beam-and-bracket entrance and a small open window above it, covers almost the entire height of the wall. The sides of the rectangle and corners of the structure are provided with pinnacles (guldastas). One arch on either side of the entrance is open to admit light, but the others, like those on the second 'storey', are false and closed. The height of these square tombs is greater than that of the octagonal ones, although the latter cover a wider area on ground plan.

Unfortunately the persons buried in most of these square tombs remain unidentified, and there exists an impression that they contain the remains of nobles, while the kings were buried in octagonal ones. On the other hand, it seems likely that the square plan became popular in the Lodi period, as the first inscribed tomb of this design, the tomb of Mubărak Khān, popularly known as Kāle-Khān-kā Gumbad, is dated to 1481 during the Lodi rule.

Khizr Khān's son and successor, Mu'izzu'd-Din Mubarak Shah is said to have founded a city called Mubārakābād along the Yamuna, but no trace of it now remains. He died in 1434, and lies buried in Kotla-Mubarakpur at Delhi, His tomb, octagonal on plan, with a central chamber and verandahs all round, each side pierced by three openings, is typical of this style. Originally it was enclosed within a large octagonal enclosure. Its wide dome rises from a sixteen-sided base, each corner provided with a pinnacle, and the top of the dome being surmounted by a lantern. The centre of each side is occupied on the roof by a pillared octagonal kiosk (chhatri), and each corner is provided with a sloping buttress in the Tughluq style. With its low and wide dome, and with the same contours repeated on the

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domes of the chhatris, the whole structure looks stunted.

The tomb of Muhammad Shāh (died in 1444) lies in the Lodi gardens. It is also built on an octagonal plan, but here the drum is raused, and so is the height of the *chhatris*, with the result that it is a much more impressive structure than Mubārak Shāh's tomb.

E. THE LODI DYNASTY (1451-1526)

During the reign of Muhammad Shāh Sayyid (1434-44), Buhlul Lodi, the Afghan governor of Sirhind, had extended his influence through Panjab and had become almost independent. 'Alāu'd-Din 'Alam Shāh, Muhammad Shāh's son and successor, retired to Budaun, leaving the governorship of Delhi to one brother-in-law and the superintendence of the city-police to another. The two, however, fell apart, and in 1451 Buhlül Lodi captured the throne, although initially he professed to reign on behalf of 'Alam Shāh.

Buhlül (1451-89) brought some kind of order on the political scene, but was engaged largely in subduing the provincial kingdom of Jaunpur and other chefs. His successors, Sikandar and Ibrahim remanned likewise engaged. Under such circumstances there existed no impetus for raising new buildings; and all that the Lodis left are some tombs in the two styles that had come into vogue during the Sayyid period. The simplest octagonal tomb is an open pillared pavilton, and a large number of them are found all over Delhi. But even the elaborate design continued to be followed till the reign of Akbar, although by then the royal tombs had come to have a different design. There are several

tombs of the square variety in Delhi, a large number of them scattered between Hauz-Khāss and Kotla-Mubarakpur, but the identity of the persons buried in them is not known. The Shīsh-Gumbad in the Lodī gardens at Delhi follows the pattern described earlier (p. 258). It was decorated with glazed tiles, from which it derives its present name, meaning 'dome of glass'.

Buhlül Lodi's tomb in Chiragh-Delhi is a poor square structure, each side broken by three arched openings and the roof surmounted by five domes. Sikandar (1489-1517) lived at Agra and raised some buildings at the place which acquired from him the name of Sikandara. No remains of these buildings. however, remain. It is, however, his tomb in Delhi which exemplifies the final phase in the evolution of the octagonal tomb The tomb proper possesses the same features as Muhammad Shāh's tomb, except that the chhatris on its sides are now missing. It stands within a large square garden enclosed by high walls, provided with a wall-mosque on the west, octagonal towers on the corners and an ornamental gateway on the south. The mosque and garden enclosure are features which later became characteristic of the Mughal tombs and assign to it a transitional position between the earlier fortified tombs and the spacious garden mausoleums of the Mughals.

Two mosques built in Delhi during the rule of the Lodis deserve mention, as certain features, which developed into important characteristics in the Mughal period, are found introduced here for the first time. The prayer-chamber of the Barā-Gumbad mosque in the Lodi gardens, built in 1484, is divided into five bays and is surmounted by three domes, resting on corbelled pendentives, the end bays being

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roofed by low vaults. Its façade is broken by five arches of almost equal height but unusual shape. At the rear, oriel windows project from the ends and the centre; and the external angles and the mihrāb bay are strengthened by sloping buttresses. The entrance to the courtyard was through an imposing domed gateway, now known as Barā-Gumbad, which has 'double-storeyed' façades. The mosque is profusely ornamented with foliage and inscriptional decoration and coloured tilework.

The Moth-ki-Masjid built by Miyan Bhoya, a minister of Sikandar Lodi, is raised from a platform faced with cells. Built of ashlar grey stone, its prayerchamber is also faced with five graceful arched openings, the central one being the highest, and each fitted with tiled medallions in the spandrels. The central bay and the end ones are domed. The central dome is supported on squinch niches, and the side ones on corbelled pendentives. Like the Bara-Gumbad, it has sloping buttresses flanking the rear projection, double-storeyed corner-towers at the rear and oriel windows. On the two corners of the eastern compound-wall, there are octagonal domed chhatris to match with the rear towers. The central mihrāb of the prayer-chamber is built with red sandstone and bordered with inscriptions from the Quran, while its ceiling is decorated with plaster-work.

During the later part of his reign Ibrāhim Lodī (1517-26) became particularly suspicious and capricious, not hesitating even to maltreat or imprison his nobles and provincial governors, with the result that there was always someone among them in rebellion against him. Babur, the Mughal king of Kabul, had already raided India twice, but now Daulat Khān Lodī, governor of Lahore, who was

much too discontented with the Sultan, sent him an invitation to attack the Lodi ruler. Babur marched into India in 1523 but had to go back owing to the pressure by Uzbeks on Balkh. In 1525 he returned, and the armies of Ibrāhim and Bābur met at the famous battle of Panipat. Ibrāhim was killed and Bābur occupied Agra and Delhi. Ibrāhim's tomb lies at Panipat. The original tomb itself was perhaps a modest structure. All that one now sees there is a grave on a brick platform, obviously an almost recent construction

4. MONUMENTS OF THE PROVINCIAL KINGDOMS

The Sultans of Delhi ruled over the different parts of the country through their governors. The ambition of these governors or the weakness of the central authority led them, sooner or later, to throw off the central lyoke and to become independent, not only politically, but also, to some extent, culturally. The provinces thus developed regional styles of architecture, which were condutioned by several factors, such as the extent of the influence of the central power, the personal taste or interest of the ruler, contact with foreign traditions, influence of earlier local traditions, presence of suitable craftsmen and availability of particular materials.

In the main, eight provincial styles, including those prevalent in what is now Pakistan, are generally recognized, although other variations, less significant, could also be pointed out. The main characteristics only of these styles and their products are described below under each provincial kingdom.

A. PANJAB (circa 1150-1325)1

In Panjab two towns or erstwhile provincial headquarters came under the control of the Muslims, albeit they arrived there through different routes and in different periods. As a result of the Arab invasion early in the eighth century, a Muslim kingdom was established at Multan, while at a later date both Mahmüd of Ghazni and Muhammad of Ghūr secured Lahore as base for their inroads on India. The use of brick, coloured tilework and woodwork characterize the Panjab style. No monuments of this period have survived in Lahore, although it is noticed that some later woodwork in Lahore and other towns of Panjab retains certain features which were derived from Saljuqian ornamentation and characterized the Panjab style.

The position is different at Multan, where five tombs enshrining the remains of saints were built between the middle of the twelfth and the beginning of the fourteenth centuries. Among these the most impressive is the tomb of Shah Rukn-i-'Alam (built in circa 1320-25), with its octagonal ground plan, battered walls and tapering minarets and corner turrets (guldastas). Its picturesqueness is heightened by the use of coloured tiles, chiselled brickwork and bands of carved timber. It was built at the order of Ghiyathu'd-Din Tughluq (1321-25), who was devoted to the saint: this explains the use of battered walls, a characteristic of Tughlug architecture. On the other hand, in the matter of octagonal plan, Multan architecture may have influenced the Delhi architecture, as the first octagonal tomb, that of

¹ A brief description of the style in Panjab (Pakistan) has been included, so as to give a comprehensive idea of the provincial styles, and also because it exerted some influence on the Delhi architecture.

Khān-i-Jahān Tilangāni, was erected much later in Delhi during the reign of Firūz Shāh Tughluq (above, p. 256).

B. BENGAL (circa 1200-1550)

In or about 1202 the Hindu king Lakshmanasena Bengal was surprised and overrun at Nadia (Navadvīpa) by Bakhtyār Khaljī's son, Muḥammad Khalji, who subsequently established a more or less independent administration there, although nominally under the Delhi Sultans. It was, however, during the rule of Muḥammad Tughluq that Bengal became really independent. In 1576, Dā'dd Shāh, the last Afghan ruler of Bengal, was killed by the generals of Akbar and the province reverted to the central imperial control.

The Islamic monuments of Bengal are not much different from such buildings elsewhere on plan and in design, but the use of a different building-material and the execution of details inspired by local traditions have made them quite distinct. The socalled 'Bengal' roof with sloping cornices, which originated from bamboo-construction, was adopted by the Muslims, and later it spread widely even in other regions. Brick was the chief building material in the alluvial plains of Bengal from early times and remains so even now, the use of stone being limited largely to pillars, which were mainly obtained from the demolished Hindu temples. The pillars in Bengal. even when constructed with brick, are generally short and square, and the openings usually arcuate, for trabeate construction normally called for the use of stone. Stone carving in low relief is seen in some buildings. But it is the traditional carved brick which was pressed into service for decoration.

Only the patterns became geometrical, arabesque or floral, without any weakening in their richness and profusion. Glazed tiles in pleasing colours were also used for decoration.

The Islamic architecture of Bengal may be divided into three phases: (i) from circa 1200 to 1340, while the capital was at Lakhnauti (later called Gaur) and the kingdom still nominally under the Delhi Sultans; (ii) from circa 1340 to 1425, when the capital was at Pandua; and (iii) from 1425 to 1576 during which the capital was again shifted to Gaur.

Gaur and Pandua are separated by a distance of only 27 km. and lie in the present Malda District of West Bengal; their entire area is covered with the remains of citadels, palaces, gateways, mosques and tombs. Monuments of the first phase are no longer extant at Gaur. Some idea of their character may, however, be gleaned from contemporary remains at and near Tribeni on the Hooghly river, which was apparently occupied by the Muslims in the initial stages of their arrival in Bengal.

Here the mosque of Zafar Khān Ghāzī, an early adventurer, bears an inscription of 1298 but was entirely rebuilt in the sixteenth century. His tomb, however, shows that it was built largely with reassembled material from a Hindu temple, although pointed arches were incorporated in the design.

An early mosque in the neighbouring village of Pandua (different from the capital in Malda District), now extremely dilapidated, is multi-domed and rectangular on plan. It is built with brick, but the pillars are of stone obtained from a demolished temple. In the neighbourhood is a 36'5-m. high brick tower, built about 1340 in several storeys. Even with its crude proportions, it recalls the Qutb-Minār at Delhi.

There are extensive mounds of ruins at Pandua made capital in or about 1340 by 'Alau'd-Din 'Ala Shah, perhaps to bring himself within a striking distance of Sonargaon, where his rival Fakhru'd-Din Mubarak Shah held control.

There is, however, only one monument here which illustrates the second phase in the development of the Islamic architecture in Bengal. It is the Adina-Massid, in fact, an elaborated version of the mosque at Pandua near Tribeni, just described. Begun in 1364 by Sikandar Shah (1357-93), it is one of the largest mosques in India, with its outer dimensions measuring 154.5 m. by 87 m. Built on the usual rectangular plan, it has an impressive facade of arches on the interior extending to a depth of five bays on the west and three on the other sides; all its cubicles are surmounted by a total of three hundred and seventyeight small domes. Stones pilfered from demolished Hindu temples, possibly from as far as Lakhnauti, have been used in its pillars, carved mihiābs and as veneer in the lower portion on the exterior and up to the cornice inside the prayer-chamber. In the prayer-chamber the trefoil or multi-foil arches of the mihrab and another adjacent niche, placed within a rectangular frame and carved with stylized geese and other motifs, are remarkably indigenous in feeling. Its arches, with the centre at the impost level and with the span in excess of the radius, lend a peculiar fascination to the aisles. Part of the northern half of the prayerchamber is divided into two storeys, the upper storey known as the Badshah-ka-Takht ('king's throne') being obviously intended for the king and royal ladies. Its spacious nave was roofed by a vault of pointed arch.

The third phase constitutes the real provincial style of Bengal, when the builders ceased to depend on the utilization of material stripped from Hindu temples and brought their structures into harmony with the local traditions and materials. The first great construction of this style is the mausoleum of Jalalu'd-Din Muhammad Shah (1414-31), called the Ekläkhi tomb, at Pandua, while the other monuments of this phase are mostly concentrated at Gaur.

The Eklakhi tomb consists of an octagonal tomb-chamber, within a large square hall with octagonal corner-towers and curved cornices, the roof being surmounted by a central hemispherical dome. Its façade is divided in the middle by a stringcourse with panels above and below it giving it the semblance of two 'storevs'. Each side is pierced in the centre and fitted with a stone door-frame, bodily removed from a temple but provided with a pointed arch above the lintel in the Tughluq style. The whole surface of walls and towers is profusely decorated with carved brickwork.

At Gaur the earliest building representing the constructional and ornamental methods of this style, although of an entirely different character, is the Dākhil-Darwāza, built by Bārbak Shāh (1459-74) as a ceremonial gateway in front of the citadel. With a tall arched entrance between vertical pylons on either side and tapering towers on the corners.

it is an imposing structure (pl. LXXIV).

The main features of construction in the Ekläkhi tomb, however, set the pattern for several mosques at Gaur and elsewhere. These mosques with curved cornices and often decorated with glazed tilework comprise a rectangular prayer-chamber tioned into several aisles and bays, divided by pillars of brick or stone, the latter mostly removed from

Hindu temples. Arched openings characterized their façade and also sometimes the sides. At the corners stand towers, usually octagonal. There are small domes over each bay or a bigger one in the centre. The facades are divided by one or two string-courses and series of decorative panels. The western wall in the interior bears several niches, the central one being larger and more plentifully decorated. The usual courtyard in front of the prayer-chamber has been dispensed with in several mosques. Such are the Tantipara (circa 1475), Chamkati or Chamkan (circa 1475), Darasbari (circa 1480), Lotan (circa 1480), Gunmant (circa 1484), Chhota-Sona (circa 1510), Barā-Sonā (circa 1526) and Oadam-Rasül (1530) mosques at Gaur. The Darasbari-Massid is particularly rich in terracotta ornamentation, including the rather unusual 'palm-and-parasite' motif, which is found also in Gujarat, although in a latticed screen (below, p. 277). The small rectangular tomb of Fateh Khan (died circa 1657) at Oadam-Rasul is covered by a gabled and curved roof, the structure looking like a thatched hut.

The 26-m. high Firūz-Minār at Gaur, twelvesided in the lower three storeys and round in the upper two, is decorated with both carved bricks and glazed tiles

C. JAUNPUR (circa 1360-1480)

Malık Sarwar, originally a eunuch in Muḥammad Tughluq's household, held the title of Khwājai-Jahān ('Master of the World'), and, after Firūz Tughluq had declared Jaunpur a provincial capital, was appointed the governor of the province with the title of Maliku'sh-Sharq ('King of the East'). In 1394, he became independent and extended his

authority over Oudh, Tirhut and Bihar. He and his successors, known as Sharqī kings, ruled from

Jaunpur for nearly a century.

After Malik Sarwar's death, his adopted son Ogaranful ascended the throne under the name of Mubārak Shāh (1399-1402). His successor, Ibrāhim Shāh (1402-36), was a great patron of learning and architecture, and utilized the talents of the poets, artists and craftsmen who had left Delhi after the devastation brought about by Timūr's raid, Jaunpur now came to be known as the 'Shirāz of India'. Finally Husain Shāh, who came to the throne in 1458, was driven from Jaunpur by Buhlul Lodi and the Sharqi dynasty thus came to an end. Later Sikandar Lodi annexed Jaunpur to the Delhi Sultanate. He spared the mosques, but other buildings at Jaunpur suffered total devastation at his hands.

Jaunpur was a prosperous Hindu town with several temples, which were all pulled down by the Muslims and the material utilized in mosques. Among the pre-Sharqi Muslim buildings at Jaunpur is a fort and a mosque, both now dilapidated. The mosques erected by the Sharqi rulers are built on the conventional plan, but they possess distinct characteristics in which tapering minarets, battered sides of the pro-pylons, stucco decoration, arch-andbeam openings and low four-centred 'Tudor' arches with decorative fringes are features influenced by the Tughluq style. The square pillars in the mosques are comparatively plain, and bracket and capitals only roughly carved. The Sharqi monuments are, however, more ornate than the Tughluq ones. Their carved stone ceilings, latticed screens, panels and arches with their tympana, all bear floral and geometrical designs of somewhat rough but effective workmanship. The one distinct feature of Jaunpur

style, however, is the pro-pylon, a tall screen with battered sides concealing the dome, and raised in front of a gateway or an opening of the prayerchamber.

The Atala-Masjid was the first building to be erected in Jaunpur style. Its foundations were laid in 1377 by Firūz Shāh Tughluq on the site of the Hindu temple, said to be of Atala-devi, but the construction was taken up later by Ibrāhim Shāh and completed in 1408. It has the usual quadrangular plan, with a square courtyard enclosed by the prayer-chamber on the west and cloisters on the other three sides. The cloisters are in five aisles and double-storeyed, two aisles on the lower storey with a pillared verandah opening on the outside and providing a series of cells for use by pilgrims or merchants. Beams and brackets support the openings in cloisters.

On each side the cloisters are interrupted by a gateway fronted by a pro-pylon. The pro-pylon in front of the nave in the prayer-chamber, 23-m. high and 17 m. wide at the base, is, however, the most graceful and imposing (pl. LXXV). Containing a tall recessed arch, 3.4 m. deep, flanked by two towers, with series of openings in the upper portion, it also provides the entrance to the nave through a central beam-and-bracket opening surmounted by an arch. The verticality of its towers on either side of the tall arch is broken by four main string-courses and sunk arches. Two other similar propylons of smaller size are placed on either side of this main one.

The nave in the prayer-chamber is vertically divided into three portions, so that the sides are first converted into an octagon by means of squinches and then into a sixteen-sided base by brackets, in order to raise the shapely hemispherical dome. At

one end of the transepts, supported on pillars and screened by jālīs, is the enclosure reserved for ladies. At the rear, not merely the portion occupied by the main mihrāb but also those by the other two mihrābs facing the side pro-pylons, project outwards and are flanked by tapering minarets in the Tughluq fashion.

Two other mosques, built about 1430, generally on the same pattern as the Atala-Masjid, are Khalis-Mukhlis-Masjid and Jhānjhrt-Masjid. The former is simple and devoid of much ornamentation; the latter, its central pro-pylon alone now surviving, shows that its screen (Jhānjhrī), from which it derives its name, is highly ornamental. Another mosque, the Lal-Darwāza-Masjid, was built about 1450 Bibī Rājā and forms part of a palace-complex.

The Jāmr'-Masjid, which is the largest mosque at Jaunpur, was built about 1470 by Husain Shah (1458-79), the last Sharqi ruler. Its two distinct features, absent in other mosques preeding it, are that, like some of the Tughluq mosques in Delhi, it is built on a raised terrace; and its transepts on either side of the nave are covered by high vaulted roofs, a feature which is not found in any other similar building.

D. GUJARAT (1297-1572)

Gujarat was conquered by 'Alāu'd-Din Khalji in 1297, and he appointed a governor there. Muḥammad II (1390-94), grandson of Firūz Shāh Tughluq, sent Zafar Khān as its governor, but he declared himself independent in 1408 and ascended the throne under the title of Sultan Muzaffar (1408-11). It was, however, during the rule of his grandson and successor Aḥmad Shah (1411-42) that Gujarat

became independent in reality. Among the Sultans of Gujarat, the long reign of Mahmüd Begarha (1458-1511) is regarded as most prosperous. His grandson Bahādur Shāh (1526-37) came on the throne about the same time when the Mughals captured the Delhi throne. Gujarat, however, remained independent till 1572, when it was annexed by Akbar.

The Gujarat style is the richest and perhaps the most prolific among the provincial styles. A rich local architectural tradition and the vanity and patronage of powerful Gujarat kings, which impelled them to raise buildings in rivalry with other kingdoms, including the Sultanate of Delhi, appear to be responsible for the production of so many im-

portant monuments in Guiarat.

The long span through which the Islamic architecture in Guiarat passed can be divided into three periods. In the first period (1297-1411), from the time Gujarat came under the control of 'Alau'd-Din Khalji till it became really independent, buildings in Gujarat were either converted from Hindu temples or built largely with their dismantled material. The Khalji conceptions of symmetry and proportions, blended with the local leaning towards spaciousness, elegance and decorative designs, created a new idiom. But among the important monuments raised during this period at Patan, Broach, Cambay, Dholka, Mangrol and Petlad, few have survived. At Patan. where numerous temples were erected during the Solanki rule, a temple was converted in about 1300 into Shaikh Farid's mausoleum. Even in the Adina or Jāmi'-Masjid here, built by the Khalji governor Ulugh Khān, now survived only by its foundations, pillars from Hindu temples were re-erected to the plan of a mosque.

In the Jāmi'-Masjid at Broach, built early in the fourteenth century, the open pillared prayer-chamber is divided into three compartments, each compartment containing apparently pillars from a single mandapa. Its western wall contains niches provided with pointed arches and carved on the general pattern of the niches in Hindu temples, but with motifs characteristic of Islamic ornamentation.

Unlike the mosque at Broach, the prayer-hall in the Jami'-Masjid at Cambay, built in 1325, is not an open pillared hall, but one closed with walls and provided with arched openings, as in the Quwwatu'l-Islam mosque at Delhi (p. 247) or the Arhāi-Din-kā-Jhonprā at Ajmer (p. 249). The alternating narrow and wide courses in its construction. however, recall a Khalii characteristic noticed at Delhi (p. 250). The pillars inside the central arch bear an engrailed arch, like a torana in a temple, a device which became very popular later. The Hılāl Oāzi's mosque at Dholka is smaller but introduces for the first time a graceful minaret on either side of the central arch, a feature which later became characteristic of the Guiarat architecture. The Tanka-Masjid, again at Dholka, built in 1361, has an open pillared prayer-hall, and rich carvings on the pillars and ceilings. The Jami'-Masiid at Mangrol possesses three archways and balconied windows.

The second period (1411-58) in the development of Gujarat architecture commenced with the enthronement of Ahmad Shāh (1411-41), who brought real independence to the province and founded the city of Ahmadabad, close to the old town of Asawal. It was now that a distinct Gujarat style took shape. Theuncertainties of the earlier improvisation and experimentation disappeared; the buildings

were thoughtfully planned and executed to result in complete specimens of the style. The device of admitting light through a clerestory in the raised central portion of the roof, graceful minarets, delicate latticed screens, profuse carvings in windows supported on carved brackets and a balanced use of both arcuate and trabeate construction are some of the features characteristic of this phase.

The citadel raised by Ahmad Shah on the bank of the Sabarmati river is survived now only by a gateway, called the Bhadra gateway. Ahmad Shah's mosque inside the citadel, surmounted by two rows of five domes each and with a facade of five arches, contains at least some pillars reused from Hindu temples and follows the pattern of the Jami'-Masiid at Cambay. In Haibat Khan's mosque, surmounted by three domes, the two turrets in front and the five bastions at the rear, all tapering, suggest Tughluq influence. The five-domed mosque of Savvid 'Alam, built in 1412, strikes, however, a new note with its prominent minarets, now survived by their bases, heavy projecting cornices, pillared openings on the sides, rich decorative details and the addition of a gallery or triforium on the second storey around the nave. It is, however, in the Jami'-Masiid, built in 1423, that these and other characteristic features came into full play and created a monument which is grand in conception and finished in details.

The prayer-hall of this mosque, 64 m. by 29 m., consisting of about three hundred pillars, is divided into fifteen large squares, three along the depth and five along the width, each square being surmounted by a large dome, while smaller domes cover the smaller squares between the larger ones. The sky-line of the roof is broken by raising the portion over the three central arches into two storeys in the

first bay, and the portion around the central dome above the nave into three storeys. The single-storeyed height at the northern extremity adjoining the rear wall is divided into two storeys, the upper one consisting of a latticed gallery for the ladies.

Ahmad Shah desired to integrate the Jami-Masjid and his citadel into a unified plan. Accordingly he built a three-arched ceremonial gateway, called the Tin-Darwäza, to the east of the Jami-Masjid on the road from the citadel. To its south lie Ahmad Shah's tomb and a latticed enclosure containing the tombs of the queens. called Rani-ka-Hazira.

Muḥammad Shāh (1442-51) built in 1446 the mausoleum and mosque of the famous saint, Shāikh Aḥmad Khaṭṭū, at Sarkhej, 10 km. south-west of Ahmadabad. This grouping of a mosque and mausoleum, called Rauza, became very popular in Gujarat. Later Sarkhej became an important place of retreat; and several mosques, tombs, palaces, gateways and gardens were laid out here around a vast reservoir.

The next ruler, Outbu'd-Din Ahmad Shah (1451-58), built a mosque and his tomb. The former, consisting of a pillared rectangular hall faced with a wall containing five arches and surmounted by five domes, is a simple structure, but nonetheless effective with a restrained use of latticed windows and other ornamentation. To his reign also belong two other buildings, constructed with brick and in a style which has little relationship with the architecture of Guiarat. These arose perhaps as a result of commercial contact between southern Persia and the west Indian coast. Of these the mosque of 'Alīf Khān at Dholka was built in 1453 and is now in ruins. Its interior is divided into three squares, each surmounted by a dome, intercommunication being provided through arched openings, and there being

massive rectangular turrets on either side of its arched façade. The tomb of Darya Khan, built about the same time at Ahmadabad, consists of a square chamber in the centre with an arcade of five bays around it, each bay roofed by a dome, the

central one being the largest.

Guiarat architecture reached its zenith in the third and final phase (1458-1572), which began with the rule of Mahmud Begarha (1458-1511). In this period a happy and effective fusion was achieved hetween the local traditions and the methods and principles special to the Islamic architecture. The high standard of architecture now reached was due in no small measure to the personal zeal and interest of Mahmud Begarha himself, and in fact, most of the major monuments were erected during his rule. He founded the cities of Mustafābād at Junagadh, Mahmūdābād, 27 km, from Ahmadabad and Muhammadabad at Champaner, all of which can be proud of some important Islamic monuments. The number of buildings erected during this period is very large, and only some of them are noticed here.

Notwithstanding the king's interest in his recently founded cities, Ahmadabad continued to be enriched by new buildings. The mosque of Muḥāfiz Khān, who was appointed the magistrate of Ahmadabad when Mahmud Begarhatook his residence at Mustafābād, was built in 1492. It is small in size and conventional in pattern but contains all those features and details which characterize the larger mosques, and is virtually a gem of architecture. The mosque of Rānt Stprī built in 1514, is also small, but beautiful in decorative workmanship. Its tall slender turrets, solid and without stairways, placed at either end of its pillared façade, mark a new stage in the development of minarets. The walls of Stdi Sarid's mosque,

built in 1572, consist substantially of perforated screens, but it has become world-famous on account of its screens covering the tympana (pl. LXXVII A). These screens, some of them representing the 'palm-and-parasite' motif, which occurs also in the Darasbārj-Masjid in Bengal (p. 268), has the

delicate quality of filigree-work.

Certain monuments were also erected in the suburbs of Ahmadabad, At Uthmanpur, on the other side of the river opposite Ahmadabad, was built in about 1460 the Rauza of Savvid Uthman. in which the hall of the mosque is roofed by low domes, and at either end of the pillared facade stands a six-storeyed minaret. The mosques of Mıyan Khan Chishti and Bibi Achüt Küki, at Hajıpur and Multanpur, built in 1465 and 1472 respectively, are divided into three compartments and screened with walls pierced by arches, with a minaret flanking the central archway on both sides. At Rasulabad, popularly known as Shāh-i-'Ālam on account of his tomb here, 2.5 km. south of Ahmadabad, several buildings came up between 1475 and 1570. So also at Batwa, about 10 km, south of Ahmadabad, where the tomb of Outb-1-'Alam, built about 1480 over an earlier grave, is important. It is a doublestoreyed structure consisting of pillars and arches, no trabeation occuring in the entire structure. A similar construction is the tomb of Mubarak Sayyid, built in 1484, near Mahmūdābād, which was founded by Mahmud Begarha in 1479. At Sarkhei, Muhammad Shah (1442-51) had built a tomb, as mentioned earlier (p. 275). Mahmud Begarha added there, among other buildings, a double-storeyed columned palace, with projecting bays and pavilions, and his own tomb.

At Champaner, in 1485, he had founded his new capital of Muhammadābād, consisting of a

citadel and outer city-walls. Among several monuments existing there, two are important. The Jāmi'-Masjid here was built in 1523 on the same pattern as the Jāmi'-Masjid of Ahmadabad. The much smaler Nagina-Masjid follows the plan and details of the larger mosques, but impresses more as an ornamental niece.

The traditional fondness for decoration among the craftsmen of Gujarat resulted in even purely utilitarian constructions being treated with ornamentation. Such are the sluice-openings, as for example, at the Kankaria reservoir at Ahmadabad and at the tank at Sarkhej and bāolīs or stepped wells, as Bai Hari's bāolī at Ahmadabad.

E. MALWA (1401-1561)

Malwa was invaded by Iltutmish early in the thirteenth century, but it came under the control of the Delhi Sultanate in about 1310 during 'Alau'd-Din Khalji's rule (1296-1316), In 1401 Dılawar Khan Ghuri, a governor, who claimed to be a descendant of Muhammad Ghūri, proclaimed himself independent. This independent kingdom was annexed by Gujarat in 1531, and later conquered by Humayun. When Humayun regained his throne after his return from exile, Shuja'at Khan, who had been appointed governor by Sher Shah Suri, refused to acknowledge his authority. In 1554 Shuia'at Khan died and his son, Baz Bahadur, whose romantic tale of love with Rani Rupamati is well-known, ascended the throne. He was driven away in 1561 by Adham Khan, Akbar's general, and Malwa thus came under the authority of the Mughals.

The local Hindu architectural traditions did not much influence the Islamic constructions in Malwa:

instead the province depended on Delhi, from where many craftsmen were uprooted in consequence of the devastation wrought by Timur and had taken employment in different provinces. It is no wonder, therefore, that the Malwa style is essentially arcuate. The pointed arch with 'spear-head' fringe, battered wall and arch-and-lintel door in this style are derived from the Khalii and Tughlug constructions, while the pyramidal dome follows the Lodi contours. The style possesses, however, some features of its own, such as large spaces, high plinths approached by impressive flights of stairs, skilled use of arch-andbeam, carved brackets supporting the windows, perforated screens and the decorative effect achieved by the use of stones of different colours or of encaustic tiles.

This style also passed through three phases, as we find with some other styles, although its third phase is of a different nature. In the earliest phase use was made of pillars obtained from demolished Hindu temples, but they were tied to each other by arches on the principles of Islamic construction.

Dhar, capital of Malwa under the Paramāra kings, retained that postuton under the Muslim governors and kings till 1405, when Hūshang Shāh (1405-35) transferred the capital to Mandu. There are two mosques at Dhar which illustrate the first phase in the Malwa style. The mosque of Kamāl Maulā (circa 1400), also known as Bhojašālā, consists of a courtyard with pillared corridors on three sides and a prayer-chamber along the western wall. The pillars are taken from what was the Bhojašālā rol ka temple but also a college, since some of the inscribed slabs found from the ruins bear literary texts of Bhoja. The Lāṭ-Masjid, built in 1405 by Dilāwar

Khān, is similar and contains fragments of an iron pillar (Hindi lāt), from which it derives its name.

Mandu lies 35 km, south-east of Dhar on the spur of a Vindhyan hill, some 610 m, above the sea. surrounded by a gorge. It was, therefore, ideally situated from considerations of security, which led Hüshang Shah to shift the capital here. Within the natural fortress, enclosed by battlemented walls running over a circumference of 40 km., were raised several mosques, tombs, palaces, tanks and pavilions, depending on the contours of the terrain. Two of the mosques here belong to the first phase and are built from the remains of Hindu temples. These are Dılāwar Khān's mosque, built in about 1405, and Malik Mughith's mosque, built in 1452. In these mosques the spaces between pillars are spanned by arches, even though they are ornamental rather than functional.

Among the entrances to the fort, two are well-known, the Delhi Gate on the north and the Tārāpur Gate on the south-west The other monuments lie in several clusters, three of them important. In the first cluster are the Jāmt-Masjaid, Ashrafi-Maḥal and Hushang Shāh's tomb; in the second, Hindolā-Maḥal and Jahāz-Maḥal, and in the third, Bāz Bahādur's palace and Rānī Rūpamati's paylion.

The Jāmi-Masjid was begun by Hūshang Shāh but completed in about 1440 by Maḥmūd I (1436-69) of Khaliji extraction, who had killed Hūshang Shāh's son and enthroaed himself. The square courtyard of the mosque has an open façade of eleven arches on each side, with a depth of three aisles on the north and south, two on the east and five in the prayer-chamber. It is built on a raised plinth approached by a long flight of steps on the east. The square gateway, projecting from the enclosure

and with its interior decorated with enamelled tiles, is surmounted by a large dome, while there are three similar domes over the prayer-hall and a smaller one on each square bay in the aisles.

The tomb of Hūshang Shāh, built of marble, is contiguous with the western wall of the Jāmi'-Masjid, and, like it, was commenced by Hūshang Shāh himself and completed in about 1440 by Māhmūd I. Entered through a domed porch, the square tomb lies in the centre of a quadrangle and is roofed by a large dome, with smaller cunols at the corners.

Opposite the Jami'-Masjid on the eastern side of the main north-south road is the Ashrafi-Mahal, which was built by Mahmud I, perhaps early during his reign. Originally it consisted of a large square courtyard enclosed by a series of cells on the outside fronted by two arched arcades. The central portion of the western side projected further with series of cells on its three sides and a porch in front, approached by a long flight of steps. The courtyard was later filled, and on it was raised what has been surmised to be the tomb of Mahmud I but exists now only in ruins. The corners of the quadrangle of the Ashrafi-Mahal were provided with towers, the one at the north-western corner being the largest and highest, and now survived only by its lower portion. It is believed to be identical with the Haft-Manzil of the contemporary historians and was raised to signify Mahmūd's victory over Rānā Kumbha of Chittor, who had himself raised his famous tower of victory at Chittor in commemoration of his earlier victory over Mahmūd I (p. 172).

Almost immediately inside the Delhi Gate there is a large group of buildings, two of which deserve mention. The Jahāz-Maḥāl (pl. LXXVI), an oblong structure divided into three halls, with an ornamental

cistern in the northern courtyard, was built by Maḥmūd I as a royal palace. It lies between two tanks, which brimmed over with their waters during the monsoons, and appear to have given it its name, meaning the 'ship-palace'. With a long flight of steps in front leading to its spacious terrace, provided with domed pavilions, and other pavilions projecting at the rear on the bank of the tank, it must have looked grand in its heyday. Jahāngir relates that Nūrjahān, his queen, was extremely fond of this palace, and when they stayed here they were both entertained often to long-lasting festivities.

The Hindola-Mahal, possibly raised during the reign of Ghiyāthu'd-Din (1469-1500), is T-shaped, with the vertical stem of the letter consisting of a long hall with an opening at the end and tall arches on the sides, their piers buttressed with slopes. The illusion that these buttresses create has given it its name meaning the 'swinging-palace'. The horizontal stem of the letter was added later and is in the shape of a double-storeyed structure, with a cross-

shaped hall on the ground floor.

The final phase of the Malwa buildings does not represent any advance in architecture. These buildings, consisting of palaces, pavilions, hammāms, etc., were raised for pleasure, which was the royal fashion of the day. The palace of Bāz Bahādur, approached by a flight of steps, with its courtyards, halls, octagonal pavilions and bārādaris on the terrace, and Rāni Rūpamati's pavilions consisting of a double-storeyed structure with sloping walls and containing a long hall with rooms at the two ends, to which domed pavilions on the terrace were added later, belong to this phase. Rāni Rūpamati is said to have used these pavilions daily for having a glimpse

of the sacred Narmada from here. Among other monuments representative of this phase are the Nilakantha palace, Lal-Mahal and Chishti Khan's palace.

Chanderi was a province of the kingdom of Malwa, and several buildings in the Malwa style were raised there. Kushk-Mahal, originally seven-storeyed, but now surviving in four storeys, was built here in about 1445 by Mahmūd I. The Jāmi-Masjid is built on the same plan as the one at Mandu, but contains convoluted brackets supporting the eaves in Gujarat fashion. The Shāhzādi-kā-Rauza has plain but bold squinch-arches, with lotus medallions in its tympana and spandrels. The 15-nı. high Bādal-Maḥal gateway, with tapering turrets spanned by a screen of two arches, one above the other, is original but lacks boldness or grace.

F. THE DECCAN (1325-1687)

The whims of Muhmmad Tughluq (1325-51) caused virtually an unbroken series of rebellions in the different provinces of the Delhi Sultanate. In the Deccan, which had been invaded by 'Alāu'd-Din Khalji and brought under the authority of the Delhi Sultans, Ḥasan, a general on whom Muḥammad had bestowed the title of Zafar Khān, declared himself independent in 1347 at Daulatabad. He enthroned himself under the full title of Abu'l-Muzaffar-'Alāu'd-Din Bahman Shāh (1347-58) and founded thus the Bahmanī dynasty.

He established his capital at Gulbarga, but one of his successors, Ahmad Shah (1422-35), shifted it to Bidar in 1425. After the reign of Mahmud Shah (1482-1518), the provinces of the Bahmani kingdom broke away one after another, and five independent

kingdoms came into being with capitals at Bidar, Berar, Ahmadnagar, Bijapur and Golkonda. They retained their independent status till almost the end of the seventeenth century, when ultimately they

were annexed by Aurangzeb.

Bahman Shah himself was perhaps of Persian extraction. Besides, the Bahmani rulers, who were incessantly at war with the Hindu kingdoms of the south and even attempted to exterminate the Hindu population or to convert it to Islam, encouraged Per-Turks, Arabs and Mughals to marry Hindu women and settle in their territory. This was also the time when adventurers, literary men, artists and craftsmen from west Asian countries were freely coming either to the imperial court at Delhi or to the powerful provincial court of the Deccan. These conditions naturally affected the Deccan style of architecture, which owed little to the local Hindu traditions, at least in its early stages. The two major streams which fed it were the imperial one from Delhi and the Persian one from abroad. The latter took stronger roots gradually, so that some of the monuments are so avowedly Persian in character that they appear to have little connexion with the main course of the Indo-Islamic architecture.

The earliest Islamic buildings in the Deccan that appeared during the rule of the provincial governors were converted, as might be expected, from Hindu temples. Such, for instance, are the two mosques at Daulatabad and Bodhan, near Hyderabad, the latter consisting merely of some alterations and additions to a Jaina temple. The real Deccan style, which came into existence from the time when the province became independent in 1347, may be divided into three phases: (i) 1347-1425, when Gulbarga was the capital, (ii) 1425-1518, when

Bidar served as the capital, and (iii) 1518-1687, when the original kingdom broke up into five independent kingdoms.

A series of forts were the first monuments to be erected by the Bahmanis. Among them the fort at Gulbarga, perched on a hill and consisting of double walls, battlemented with heavy stones, with an encircling moat cut into the rock, is impressive and representative of this class. It is, however, the Jāmi'-Massid at Gulbarga, built in 1367, which exhibits features of the Decean style and is, at the same time unique. Entered through a gate on the north. it has corridors on its three sides and a prayerhall on the west, which is surmounted in the centre by a tall dome resting on a raised clerestory. unique characteristic is its pillared but roofed courtvard, a feature which finds no parallel, except that the courtvards of two mosques built in Delhi during the reign of Fīrūz Shāh Tughluq (above, p. are partially covered. The arches of its cloisters, with low piers and a wide span, invest its arcades with a sombre but arresting look (pl. LXXVII B). The mosque was built under the direction of a Persian architect, which accounts for some of its features.

Among the other monuments at Gulbarga are seven royal tombs, divided into two groups. The three earlier tombs, massive structures, square on plan, with their battered walls, flat, wide domes supported on squanches, battlemented parapets and fluted corner-turrets have all the characteristics of Tughluq architecture. The tomb of 'Alāu'd-Din Bahman Shāh, the founder of the dynasty is, small but is decorated with tiles of deep blue colour. The dome of the tomb of Muhammad Shāh II (1378-97) rises from a raised base, as in the Jāmī'-Masjid.

The other group consisting of four tombs is called the Haft-Gumbad ('Seven Domes'), as three of its tombs have two domes each and make up a total of seven domes. The earliest in this group, that of Mujāhid (1375-78), is larger than the tombs of the previous group but is built in the Tughluq style like them. The remaining three tombs, share the same Tughluq features, but consist of two adjacent chambers, one for the grave of the king and the other for those of his family. Among these the tomb of Tāju'd-Din Firūz (1397-1422), with its fluted domes, is the largest. A semblance of two 'storeys' is effected both on its exterior and the interior, through panels of recessed arches in two rows.

In 1425, Ahmad Shāh Wali (1422-36), who remained ill at Gulbarga and considered it even unlucky, transferred the capital to Bidar, 96 km. north-east. The Bahmani court now included several officers of Persian lineage, with the result that the customs, art and architecture in the Deccan came under the Persian influence. The fort of Bidar is larger than that of Gulbarga and is generally on the same pattern, but the remains of several palaces inside it, such as Rangin-Mahal ('Painted Palace') Takht-Mahal ('Throne-room'), Diwan-i-'Am ('Hall of Public Audience') and Zanāna-Mahal ('Palace for Ladies'), with gardens, waterways and hammams are evidence of a royal life patterned on the courts of west Asian countries. These palaces were tastefully decorated with coloured tiles or mural paintings.

The Jāmi'-Masjid and the Sola-Khamba, the latter too a mosque, followed the plan and structural features of the mosque at Gulbarga, without however, their courtyards being roofed. Khwāja Maḥmūd Gāwān, a scholarly Persian nobleman, who had been appointed as minister by Humāyūn, nicknamed

Zālim or 'Cruel' (1457-61), but continued also during the reigns of his two successors, built in 1422 a madrasa or college, now largely in ruins. It is one of those buildings which are almost entirely Persian in details and consists of a large rectangular courtvard giving access to halls and rooms on the sides. with an entrance on the east flanked at the corners by four-storeyed minars. From the middle of the other three sides project semi-octagonal towers roofed by tall bulbous domes. In the walls of this building sheets of lead were used to serve the purpose of the modern damp-proof course. Glazed tiles with floral, arabesque or inscriptional designs were used so thickly on its surface that the construction was subordinated to decoration. Within this spacious building appear to have been accommodated a mosque, lecture-halls, living quarters and the famous library of Mahmud Gawan.

It is, however, the twelve royal tombs at Bidar, which help us to view the development of the Deccan architecture as a growing movement. They are similar to the tombs of the Haft-Gumbad group at Gulbarga, but there exists no double-chambered tomb here. Their domes are, however, stilted, with an inward return of the curve, putting them in the category of the so-called 'Tartar' dome. They all bear beautiful encaustic tiles, particularly the tomb of 'Alau'd-Din Ahmad Bahmani (1436-58).

During this period but before the construction of the madrasa of Mahmud Gawan, a 30-m. high, fourstoreved minār, called the Chand-Minar was built at

Daulatahad in 1435.

After Mahmūd Shāh (1482-1518), the Bahmanī kingdom broke up to be succeeded by independent kingdoms, five in number, in different parts. Qasim Barid, a Turki minister, was virtually the ruler from

1487 during Mahmūd Shāh's reign. He was succeeded by his son, Amir Barid. After Mahmūd Shāh's death, other Bahmanis were allowed by Amir Barid to rule in name, till 1527, when he declared himself independent, and thus the regular rule of the Barid Shāhi dynasty started at Bidar. The four other kingdoms were Berar, ruled by the 'lmād Shāhis, Ahmadnagar, ruled by the Nizām Shāhis, Bijapur, ruled by the Nizām Shāhis, Bijapur, ruled by the Shāhis, and Golkonda, ruled by the Qutb Shāhis.

The rulers of these dynasties raised numerous buildings within their realms, which represent the third and the final phase of the Deccan style. 'Imad Shahis of Berar and the Nızam Shahis of Ahmadnagar are not known for any remarkable architectural achievement, although the former founded the town and fort of Ahmadnagar where several monuments were erected. The Barid Shahis continued the traditions of Bidar and built several tombs, among which the tomb of 'Ali Barid (1542-79), the third of the dynasty, is not merely different from others, being open on all sides through its archways, but also the finest. It is, however, the dynasties ruling at Bijapur and Golkonda which were the cultural inheritors of the Bahmani dynasty and developed their own distinct styles of architecture.

The province of Bijapur became almost independent in 1490 under Yūsuf 'Ādil Shāh (1490-1510), a slave purchased by Maḥmūd Gāwān. He was perhaps of Turkish origin, as suggested by the symbol of crescent on the finals of the domes of the larger monuments at Bijapur. Among the nine rulers of 'Ādil Shāhi dynasty, four were particularly interested in architecture. These are the founder Yūsuf himself, 'Ali Shāh 1 (1588-01), Ibrāhīm 'Ādil Shāh I (1580-1626) and Muhammad Shāh (1626-56).

In Bijapur architecture the dome takes a bulbous form, with its drum concealed behind a row of petals and the arch loses its ogec character and becomes pointed and four-centred with low piers. Slender minarets or finials, chaijas, voluted brackets, medallions in the spandrels and foliated finials above the arch distinguish its decorative devices. Surface-ornamentation is executed both in stone and stucco with such motifs as rosette, hanging lamp, arabesque patterns and interlacing inscriptions.

The city of Bijapur contains a citadel and fortress, but its architecture is dominated by a large number of mosques, tombs and mahals (palaces). The Jāmi-Masjid, built during the reign of 'Ali 'Adil Shāh I (158-80) was the first among the important monuments to be erected at Bijapur, although it remained incomplete and a gateway was provided to it by Aurangzeb. Its bare exterior is broken by two arcades, the lower one of recessed arches and the upper one of arched windows from its corridors. The large central hemispherical dome over its prayer-chamber, with petals around its drum, is crowned by a crescent and is enclosed by a square fenestration with finials at the corners. Its mhrāb was embellished later with a rich design in brilliant colours.

The Gagan-Maḥal ('sky-palace'), now even without its roof, is a double-storeyed rectangular hall,
which was perhaps built about 1560 during the reign
of 'Ali 'Adil Shāh I. It is a civic building, the upper
storey of which was apparently used for private
apartments and the lower one as the king's audiencehall. What makes it worthy of notice is its façade,
which is pierced by an arch with a span of over 18 m.,
another narrow arch flanking it on either side.

The Ibrāhīm-Rauza, built by Ibrāhīm 'Ādil Shāh II (1580-1627), consists of his tomb and mosque

within a square compound, both rising face to face from a common raised terrace, with a tank and fountain between them. The mosque has a rectangular prayer-chamber, with a façade of five arches, shaded by the chhaia and a slender minaret at each corner, Enclosed within a square fenestration rises the bulbous dome with a row of tall petals at its base. The square tomb with double aisles around it, the inner one pillared, has similar features but is finer in proportions. Two narrow arches, next to the ones at each end, break up its facade. On the interior, each wall has three arches, all panelled and embellished with floral, arabesque or inscriptional traceries. The tomb-chamber has a low curved ceiling made of joggled masonry, with empty space between it and the dome.

The Mihtar-Maḥal, which, in fact, is not a mahal or palace, but the gateway of a mosque, is believed to have been built in about 1620, also during the reign of Ibrāhim 'Adil Shāh II. With slender minarets at its two corners, the façade of this two-storeyed structure is most remarkable. It is comparatively plain on the ground storey, but on the second storey its beautiful balcony with three arches in front and one each at its sides, supported on exquisitely carved brackets, and with long brackets tied to the narrow piers of the arches to support the chhaija, constitutes its main attraction.

By far the magnum opus of Bijapur architecture is the mausoleum of Muhammad 'Adil Shāh (1627-57), popularly known as Gol-Gumbad or 'Round Dome' (pl. LXXVIII), which is only a part of a larger complex, the other buildings in the scheme being a mosque, gateway called Naqqār-Khāna ('Drumhouse') and a dharma-sālā or rest-house, all confined within an enclosure. The Gol-Gumbad is the largest

domed cubicle in the world, covering a total interior surface of over 1600 sq. m. Architecturally it is a simple construction, its underground vaults consisting of a square grave-chamber enclosed within two aisles, and a large single square chamber overground. The large hemispherical dome surmounting it and the seven-storeved octagonal towers on its corners, lend it its unique appearance. Each of its walls on the outside is divided into three recessed arches, the central one panelled, with a running bracket-supported chhaifa at the cornice. A 3.4-m. wide gallery rests on its interior at the level of the drum. It is known as the Whispering Gallery. from the fact that even a whisper here reverberates through an echo under the dome. While the smaller domes on its corner-towers are of bulbous variety. the large dome is hemispherical but is covered with a row of petals at the base. The 3-m, thick brick core of the dome is a corbelled construction bound by a tenacious mortar, with iron clamps keeping the veneer stones in position.

Warangal, which was earlier ruled by the Hindu kings of Kākatīya dynasty, was one of the provinces of Bahmani kingdom. Qulī Qutb Shāh, a Turki officer, who was appointed its governor by Maḥmūd Gāwān, withdrew himself after the latter's execution, but continued to recognize the Bahmani suzerainty in name till 1518, when he declared himself independent and shortly thereafter transferred the capital to Golkonda. Later, in 1589, the capital was transferred to Bhagnagar, which was eventually named Hyderabad.

The Qutb Shāhi or Golkonda style has much in common with the Bijapur one, such as thin minarets with balconies, windows resting on brackets, lofty pointed arches and bulbous domes with elongated

necks, their base concealed behind a row of petals. Likewise its ornamentation is characterized by ornamental façades, with plasterwork and glazed tiles. The net effect is, however, somewhat different on account of a florid look lent by a large number of turrets and cupolas and excessive ornamentation, some of which betrays Hindu influence in motifs.

The fort at Golkonda follows the same pattern as the ones at Gulbarga and Bidar, but the buildings inside it are now largely in runs. The royal tombs, however, still survive and are, in fact, representative of the style. They are generally similar to the ones at Bidar. Square or octagonal on plan, some of these tombs are double-storeyed, the tomb-chamber having a low celling separating it from the ceiling of the dome. The tomb of Muhammad Quli Qutb Shāh (1580-1612) is built on a double terrace and has three overhanging galleries; that of 'Abdu'llāh Qutb Shāh (1626-72) is large and double-storeyed containing several finials.

The Outb Shāhis built several mosques at Hyderabad. The Jami'-Masiid, built in 1577, is entered through a lintelled opening and has a double prayerhall with its arches supported on heavy piers. Toli-Masjid (1671) has also a double prayer-hall, slender minarets and several cupolas, but is distinguished more by its rich surface decoration. most remarkable of the monuments in Hyderabad, however, is the famous Char-Minar ('Four Minars'). It is a gateway, with a central square structure, open on each side through a lofty arch. There are four three-storeyed minars on the corners, and a double screen of arched openings on the roof. The arcaded galleries, recessed and open arches flanking the openings and the bulbous cupolas provide the decoration which links it with the Golkonda architecture.

G. KHANDESH (1388-1601)

Malik Ahmad, governor of the Tapti valley, who had been fighting against the Bahmanis in local wars, declared himself independent and founded the small principality of Khandesh in 1388, after the death of Firitz Shâh Tughluq. He was known both as Malik Raja and Raja Ahmad, although his successors preferred the title of Khān, from which the kingdom derived its name of Khandesh or 'the country of the Khāns'. The dynasty, however, is known as Farūqi from the title of the second Caliph, from whom Malik Ahmad claimed descent. Khandesh came for some time under the control of the kingdom of Gujarat, but was finally annexed by Akbar in 1601.

The Fārūqi kings ruled originally from Thalner and later from Burhanpur. Sandwiched as Khandesh is between the Deccan on the one hand and Gujarat and Malwa on the other, its architecture was influenced by the styles prevalent in the neighbouring provinces, both in the matter of construction and ornamentation. These combined influences derived from more than one quarter invested the architecture of Khandesh with a character of its own to entitle it to a separate, if not entirely an independent, entity and treatment.

At Thalner there are several tombs, designed more or less on Hüshang Shāh's tomb at Mandu. The inscribed tomb of Mirān Mubārak (1441-57), also known as Mubārak Khān, which may be regarded as representative of the style, has general resemblance to Hūshang Shāh's tomb, but there is a wider spacing between doors and windows. Its parapets above the chhaijas are emphasized, and its stilted dome rises from an octagonal base. The cupolas

on the corners of the central raised portion are absent in some of the tombs. There exists also an octagonal tomb with ornamental fringe under its arch and profuse sculptured ornamentation on its

façades.

The city of Burhanpur was founded in 1400, when the fort, called Badshahi Oal'a, was built on the Tapti. The Jami'-Masjid at Burhanpur, built in 1588 by 'Adıl Shah IV (1577-97), also known as Raja 'Ali Khān, is conventional in pattern, but the facade of its prayer-hall with fifteen arches is flanked by a tall minar on either side in the Guiarat fashion. The Bibi-ki-Masiid, perhaps built earlier, has more originality and vitality. The facade of its prayer-hall is screened, except for the arches; and the central archway is flanked by three-storeyed minārs, which are square on plan but become first octagonal, then sixteensided, and lastly circular. Its striking feature is, however, provided by the oriel windows in its top storey. It is richly decorated with carvings and mouldings in the Guiarat style, although their workmanship is much poorer.

The tomb of Shāh Nawāz Khān, son of 'Abdu'r-Raḥīm Khān-i-Khānān, who held the post of governor, was built in the seventeenth century. It combines features borrowed from several styles: the double-storey from Gujarat, the pinnacles from

the Tughluqs and the dome from the Lodis.

H. KASHMIR (1346-1589)

Early in the fourteenth century Shāh Mirza, an adventurer from Swāt, entered the service of Sinhadeva, the Hindu king of Kashmir, who was killed and succeeded by a Tibetan. At the latter's death Udyanadeva became king, with Shāh Mirzā

still continuing as the minister. After Udyanadeva's death in 1346, Shāh Mīrzā married the widowed queen and usurped the throne. His successors ruled till 1561 except for a short interval. Among them Sikandar (1393-1416) was a religious bigot and earned the title of Butshikan ('idol-breaker'), while another successor, Sultān Zanu'li-'Abidin (1420-67) is known for his liberality towards the Hindus. Mirzā Ḥaidar, a relative of Humāyūn, captured Kashmir and ruled it as a Mughal governor from 1540 to 1551, after which Kashmir became independent once again, till in 1589, it was finally annexed to the Mughal empire by Akbar.

Stone had been used in Kashmır by the Buddhists and Hindus in their shrines, but wood was most certainly the chief material employed in their civic buildings. These, however, have not survived owing to the perishable nature of the material. Initially the Muslims raised their buildings in brick on the stone foundations of demolished temples or constructed them with timber, but later stone was rehautered.

bilitated by the Mughals.

Judging from later buildings the woodwork was one structed with logs laid crosswise, so that on a corner a log appeared as a 'header' on one wall and as a 'stretcher' on the other. In bridges, the piers which rested on rock or masonry were widened gradually in upper courses on the principles of corbelling. Where necessary, wooden pieces were joined with wooden pins or dovetailed into each other. Courses of brick or stone were usually secured between transverse or horizontal wooden members. The wooden construction on the whole, however, remained simple, without mechanical devices or expedients.

Mosques or tombs constitute the two typical buildings in Kashmir architecture, the latter known

locally as Ziārat. Sultan Zainu'l-'Ābidīn raised his mother's tomb in brick in Srinagar on the stone foundations of a temple, square on plan but with offsets at the corners. The walls were, however. provided with recessed pointed arches, and the hall roofed with domes. Encaustic tiles were set on the walls for decoration.

The Rauza of Madani is another monument which was built in 1444 on the foundations of a temple. In fact, even the Hindu carved pillars are used here both in the mosque and the tomb. chief attraction of this monument, however, is its Mughal tilework of blue, red and vellow colours, which includes the curious representation of a halfhuman and half-animal being.

The tombs of timber, square on plan, have a cubical chamber surmounted by a pyramidal roof, over which rests an angular pinnacle or spire. The mosques are either square buildings like the tombs or four such squares are placed one each in the centre of the columned sides of an enclosure.

The mosque of Shah Hamadan on the bank of the river Jhelum is built on the foundations of a temple. but its double-storeyed superstructure with projecting covered balconies is in wood. On the ground floor there is a rectangular hall, the remaining portion of the square being utilized for small chambers on the north and south. Birchbark in several layers is nailed on its roof, which is turfed and planted with flowers, the whole creating a very picturesque effect when the flowers are in bloom. The upper storey of the structure is plain but the pillars, capitals, prayer-niche and wall panels of the lower storey are carved, and the ceiling painted.

The Jami'-Masjid at Srinagar was commenced in about 1394 by Sikandar, but completed by Zainu'l-

MONUMENTS OF THE PROVINCIAL KINGDOMS

'Abidin. It was burnt and rebuilt several times, the last main restoration having been carried out by Aurangzeb (1658-1707), perhaps without interfering much with its original plan and design. It is built with brick, with a substantial use of wood, and consists of a square courtyard surrounded by arched cloisters. In the middle of each side is a square structure like that of a tomb, serving as the nave on the western side and as a gateway on the others, the principal entrance being on the south.

Later the Mughals made use of stone in Kashmir and beautified it with gardens (below, p. 322).

5. MONUMENTS OF THE SUR AND MUGHAL DYNASTIES

A vast kingdom in India came under the rule of the Mughals when Babur defeated and killed Ibrāhim Lodi, as earlier described (p. 262). The monuments raised during the long rule of the Mughals and during an interregnum when the Surs occupied the throne (1538-55), form an important chapter in the narrative of the Islamic architecture in India. The storey is taken up from the few mosques and tombs constructed during the Lodi rule, when art and architecture, in fact, all cultural activity, were showing signs of a stalemate. The Mughals infused fresh blood into the movement and carried it to its pinnacles, which was due largely to their personal interest and patronage, but also to the comparatively peaceful times and general prosperity under them. When, however, the personal interest of the rulers waned, as happened during the rule of the later Mughals, there was an abrupt decline in aesthetic appreciation and architectural enterprise. following description of the monuments erected

during the reigns of different rulers will illustrate the rise and fall of the Mughal architecture.

A. Bābur (1526-30)

Bābur was a man of culture and exceptional agardens, and at least two gardens are ascribed to him, one at Agra, and the other at Panipat in Karnal District, around the Kābuli-Bāgh-Masjid built by him. In his Memoirs he mentions having built a mosque at Agra within the Lodi fort. The Jāmi'-Masjid at Sambbal, in Moradabad District, was also built by him. Otherwise no other monuments built directly under his patronage are known to exist in India. He was not much impressed by the Indian workmen; yet in his Memoirs he gives the number of stone-culters and artisans engaged on his buildings, from which it appears that some of the monuments raised by him have not survived.

There exists, however, at Palam, near Delhi, a small brick-built mosque, with three-arched openings on its façade and a dome on the central bay, with small minarets at the four corners. It was built in 1528-29 during Bābur's rule according to an inscription. The much more ambitious and refined mosque of Jamālī-Kamāli in the Mehrauli area of Delhi was commenced about the same time but completed during Humāyūn's reign (below, p. 304).

B. THE SUR DYNASTY (1538-55)

After Bäbur's death at Agra in 1530, his son, Humāyūn, succeeded him. But he passed through very troubled times as Sher Shāh, whose grandfather Ibrāhim Khān, an Afghan from Sūr, had entered the service of Buhlūl Lodi, and who had himself served under Bābur, was now up in arms against Humāyūn and, in 1538, drove him from India, obliging him to take shelter in Iran. Sher Shāh met his end in 154b but the Sūr dynasty founded by him continued to rule till 1555, when Humāyūn returned, overthrew Sikandar Shāh Sūr and regained his throne.

Sher Shāh was not only a man of exceptional courage and a great administrator, but also devoted to learning and intellectual pursuits. He improved the communications by constructing several roads, with sarās at regular intervals, among which a trunk road from the Indus to Sonargaon in Bengal, passing through Lahore, Delhi and Agra and following an alignment that it bequeathed to the present Grand Trunk Road, is best known. Several forts were also built by him, but as architectural productions his tombs and mosques play a more important rôle in the story of the Indo-Islamic architecture.

Among the parganas assigned by Sikandar Lodi to Hasan Khan, father of Sher Shah, was Sasaramin Bihar, and it was here that the latter passed his years of adolescence and later raised some of the tombs. which represent the initial phase of his architectural undertaking. Sher Shah elaborated the Lodi octagonal pattern in the construction of the tombs, and, in fact, perfected that pattern. The members of his family he buried in three of the several tombs at Sasaram, while the master-builder, 'Alawal Khan, is himself buried in another one. The tomb of Sher Shāh's father, Hasan Khān, built in about 1535, is, like the Savvid and Lodi tombs at Delhi, octagonal in plan with a verandah around it, each side pierced by three arches, and the whole surmounted by a large and wide dome. It has, however, no batter, and its verandahs are roofed by three low

domes on each side. The general look and the composition of the structure, however, is impaired, as it rises straight from the ground and the absence of kiosks on the roof of its first storey emphasizes the bareness of its walls on the second storey.

Sher Shah's own tomb (pl. LXXIII B), built about 1540, is free from these imperfections. Situated within a large tank, 425 m. square, it is 46 m. high and much larger than his father's tomb. It rises from a platform in two terraces, with pillared domes on the upper terrace and matching pillared kiosks on the corners of the roofs of the two storeys above. Screened windows admit light into the interior from the second storey. The eight sides of the ground floor have been multiplied into thirty-two to prepare a suitable base for the dome. Access to the tomb is provided by a causeway from the northern bank. where a dignified domed structure serves as the gate and was perhaps used also as a guardroom. The tomb was originally decorated with coloured tiles, traces only of which now remain.

Sher Shāh also built the tomb of his grandfather, Ibrāhim Khāh, at Narnaul in Mahendragarh District (pl. LXXIII A), where the latter had held an assignment. This tomb follows the design of the square Sayyid and Lod tombs in Delhi but has certain new features. Its walls simulate a 'double-storeyed' construction, both on the exterior and the interior, with panelled recessed niches, both above and below a string-course. Unlike the Delhi examples, its dome is wide and low, the corners occupied by pillared kiosks and slender decorative turrets (guldastas). Originally parts of the structure were faced with enamelled tiles. The use of red and dark grey stones, latticed screens, elegant merlons, ornamental fringes under its arches, a series of lovely turrets,

Quranic inscriptions around its western niches in the interior, medallions in the spandrels of arches, a scheme of horizontal and vertical panelling and a painted ceiling of excellent brushwork—all combine to give it a very rich and effective decorative appearance.

After his enthronement Sher Shāh concentrated his building activities at Delhi, which may be described as the second phase of the Sūr architecture. To begin with, he appears to have razed to the ground the city of Dinpanäh built by Humāyūn, and on the same site, which was also perhaps the site of Indraprashab, believed to be the capital of the Pāndavas, he raised the citadel of Purāna-Qal'a with an extensive city-area sprawling around it. Among the so-called seven cities of Delhi, the Purānā-Qal'a is the sixth. It seems that the Purānā-Qal'a was still incomplete at Sher Shāh's death in 1545, and was perhaps completed by Humāyūn, although it is not exactly certain which parts were built by the latter.

On plan the Purānā-Oal'a is irregularly oblong with a circuit of 2 km., with its longer sides on the east and west. Its high walls of rubble masonry with a slight batter, 4 m. thick and as much as 21 m. high in places, have a battlemented parapet above the row of arrow-slits, behind which all along the circumference are built a series of chambers in a two-aisle depth. There are massive bastions on the four corners, in addition to five bastions in the western wall, and three gates, all double-storeved, one on each side except on the east. The gates have a veneer of red and buff sandstones, with an ornamental use of white and black marble and coloured tiles. The city of Sher Shah around his citadel was extensive, two points on its circumference being perhaps provided by the large and inpressive gates

to the west of Purāna- Qal'a and Koṭlā Firūz Shāh on the Delhi-Mathura road, both known as the

Kābulī-or Lāl-Darwāza. The Oal'a-i-Kuhna-Masjid, built by Sher Shah Sur inside the Purana-Oal'a, which served as the Chanel Royal, marks a step forward from the Mothki-Masjid (above, p. 261). It is, on one hand, anticipatory of the mosque-design as it was to take shape in the early Mughal period, and, on the other, emphasizes the ornate phase of Sher Shah's architecture, as distinct from the plain treatment noticed in the tombs raised by him. Its rectangular prayerhall at the western end of a courtyard with a shallow tank in the middle, which was originally provided with a fountain, is entered through five openings with pointed arches inclining towards the fourcentred form. The central arch, fringed with lotuscusps, is framed within decorative hands containing inscriptions and geometrical designs, with thin turrets on the corners. The entrance arch on a recessed plane is likewise treated, with an arched window supported on brackets between the larger arch and the entrance. The flanking arches are also ornamented, but not to the same extent as the central one. Below the merloned parapet runs a chhaija supported on brackets.

The inner west wall of the hall is also divided into five arched recesses, which are richly decorated with white and black marble set in geometrical patterns and framed within inscribed bands. The design of the mihrāb is unique, obtained by the sniking of one recess within another, which multiplies the scope for ornamentation. On the northern and southern sides, above the side-entrances are oriel windows, which admit light into the narrow gallery on the second storey running all round the mosque. At the

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two rear corners are semi-octagonal three-storeyed towers, with openings on the sides.

To the south of the above mosque is Sher-Mandal, a double-storeyed octagonal tower of red stone relieved by marble, with a recessed rectangular entrance within an arch on each side, the same scheme repeating itself in the second storey. Perhaps originally constructed as a pleasure-tower, it is believed to have been used by Humajyun as his library, from the stairs of which he fell down and died.

The successors of Sher Shah had no particular interest in architecture. The fortress of Salimgarh adjoining the Lal-Oal'a in Delhi is believed to have been built by Sher Shah's son, Islam Shah (1545-54), also known as Salīm Shāh, During his reign in 1547-48 was also built in Delhi, close to where Humāvun's tomb was built later, the tomb of 'Isa Khān, a nobleman at Sher Shāh's court, who also served Islam Shah after Sher Shah's death. an octagonal tomb with verandahs on all sides, and with buttressed corners and chhauas at the cornice. It is sited within an octagonal compound, in place of a square garden lay-out as in the tomb of Sikandar Shah Lodi (above p. 261), with a mosque on the western side. Islâm Shāh's tomb lies at Sasaram. It was planned as a large edifice but was never completed.

C. Humāyūn (1530-38 and 1555-56)

Humāyūn ascended the throne in 1530, but was pushed out of the country in 1538 by Sher Shāh Sūr (above, p 299). During this reign of eight years, he was continuously engaged in warfare with the provincial governors, in addition to the pressure exerted by Sher Shāh. In these circumstances, he had no

leisure, nor any enthusiasm, for intellectual or cultural pursuits, including architecture. He returned to throne in July 1555, after defeating Sikandar Shāh Sūr but died in January, 1556, which gave him no time even for the consolidation of his empire, much less for other activities. His addiction to drugs also must have sapped him off his verve and industry conducive to such activities.

Yet his reign is not entirely barren. In 1533 he laid the foundations of Dinpanäh, a new city, on the bank of the Yamuna in Delhi, and it was completed, with its walls, bastions and gates, within the short period of ten months. But no trace of it now remains, as it was pulled down systematically by Sher Shāh Sūr. After regaining his throne,

Humāvūn completed the Purānā-Oal'a.

During his reign, was, however, completed at Mehrauli, near Delhi, the Jamali-Kamali-Masiid, which had been commenced in about 1528-29 during his father's reign (above, p. 298). Jamāli was the nom de plume of Shaikh Fazlu'llah, a poet, whose tomb, profusely ornamented with glazed tiles and cut plaster lies next to the mosque. The prayer-chamber of the mosque is entered through five arched openings each of an approximately equal size and rather wide in span, the central one lying in a recessed arch and enclosed within bands and carvings of marble. Its central bay alone is surmounted by a high dome. The five recessed niches of its western wall, orielwindows at the back, octagonal towers at the rear corners and a staircase leading to a narrow gallery on the second storey are some of the features which it shares with the mosque of Sher Shah. In fact, the Jamāli-Kamāli-Masjid has an important place in the evolution of the Mughal mosque, for it combines in itself features both of Moth-ki-Masjid and

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Barā-Gumbad-Masjid (above. p 260), which had been built in the Lodi times, and of Sher Shah's mosque built later.

Humāyūn died in 1556, and his widow Hamīda Bānū Begam, also known as Hāji Begam, commenced his tomb in 1569, fourteen years after his death. It is the first distinct example of proper Mughal style, which was inspired by Persian architecture. There need be no doubt that Humayun picked up the principles of Persian architecture during his exile, and he himself is likely to have planned the tomb, although there is no record to that effect. Mirak Mirzā Ghiyāth, a Persian, was the architect

employed by Hāji Begam for this tomb.

The tomb proper stands in the centre of a square garden, divided into four main parterres by causeways (chārbāgh), in the centre of which ran shallow water-channels. The square red sandstone doublestoreved structure of the mausoleum with chamfered corners rises from a 7-m. high square terrace, raised over a series of cells, which are accessible through arches on each side. The grave proper in the centre of this cell-complex is reached by a passage on the The octagonal central chamber contains the cenotaph, and the diagonal sides lead to cornerchambers which house the graves of other members of the royal family. Externally each side of the tomb, its elevations decorated by marble borders and panels, is dominated by three arched alcoves, the central one being the highest. Over the roof pillared kiosks are disposed around the high emphatic double dome in the centre.

The mausoleum is a synthesis of Persian architecture and Indian traditions-the former exemplified by the arched alcoves, corridors and the high double dome, and the latter by the kiosks, which

give it a pyramidal outline from distance. Although Sikandar Lodi's tomb was the first garden-tomb to be built in India, it is Humāyūn's tomb which set up a new vogue, the crowning achievement of which is the Tāj at Agra. There is also a somewhat common human impetus behind these two edifices—one erected by a devoted wife for her husband and the other by an equally or more devoted husband for his wife.

There exists a fine tomb in the Lodi style, larger than the examples in Delhi, at Tijara, in District Alwar It is believed to be the tomb of 'Alfau'd-Din 'Alam Khān or 'Alam Shāh, brother of Sikandar Lodi, who was governor of Tijara for some time. He lived into Humāyun's reign, but when actually he died is not known. His massive and impressive tomb may have been built about the middle of the sixteenth century.

D. AKBAR (1556-1605)

At the death of Humāyūn, his elder son, Akbar, was only thriteen, and during his early years of rule, his tutor Bairam Khān acted as the regent. Akbar resisted verbal tuitioning and remained almost illiterate, but acquired a spirit of universal toleration and liberal outlook. Later in life he participated in theological debates between various sects of Islam and listened even to the teachings of other religions. In fact, he tried to promulgate a faith of his own, the Dini-Ilahi (Divine Faith). His relations with the Hindus were most cordial, and he married the Hindu princess of Amber, as also other Rajput princesses, and permitted them to lead their Hindu life at home. Among his trusted Hindu courtiers were Raja Mān Singh of Amber and Raja

Tcdar Mal. He was keenly interested in art and architecture. The Mughal style of painting developed under his guidance, as a result of the fusion of Hindu and Persian techniques. His architecture is characterized equally by a happy blending of the indigenous and Islamic modes of construction and ornamentation. With the exception of Humāyun's tomb (above, p. 306), in which he does not appear to have taken any personal interest, no distinct Mughal style had taken form yet. Akbar, however, gave it a character of its own for the first time.

Akhar's seat of government was Agra and not Delhi. He demolished the brick fort of the Lodis and gave a new life to the city by raising on the bank of the Yamuna his famous fort, begun in 1565 and completed in 1574. This was the first time when dressed stone was used not only in the palaces but also in the ramparts. With its high walls of a neat sandstone facing, a moat fed by the river, high gateways flanked by bastions, several halls, deliberately arranged palaces along the water-front, mosques, bāzārs, baths, gardens and sufficient accommodation for the courtiers, the fort at Agra set a new pattern in the construction of royal citadels that was to serve as a model for later ones. Akbar's buildings were constructed with red sandstone. Unfortunately several of these were remodelled or replaced by Shāhjahān, who preferred marble to sandstone in buildings of personal use. Among the buildings constructed by Akbar in the fort, the Akbari-Mahal and the two Minā-Bāzārs deserve notice.

All these buildings are of red sandstone, with trabeate construction and restrained ornamentation. Now in ruins, the Akbari-Mahal consists of a series of chambers opening into a spacious courtyard. The Jahängiri-Mahal (pl. LXXIX), reputed to have been

built by Akbar for his son Jahangir but likely to have been built by Jahangir himself, consists of a central courtyard, surrounded by double-storeyed halls and chambers. The jambs, brackets, corbels and lintels of its doorways, with a chhajja above them, are profusely sculptured. The different rooms in this palace are believed to have been used for different purposes by the Hindu wives of Akbar and Jahangir. While in the long Mina-Bazar, which was originally accessible from the Delhi Gate, a regular market was held, in the smaller Mina-Bazar, near the Minā-Masjid, the wives and daughters of the courtiers dressed as tradesmen held a market on the occassion of Naurūz ('New Year's Day') as a pastime for the king and his wives, who bargained with them and finally closed the deals by giving them rich presents.

After Akbar had the misfortune of losing his children in their infancy, he was foretold by the saint Shaikh Salim Chishti, residing at Fatehour-Sikri, 35 km. west of Agra, that he would have three sons who would survive. Later he sent his pregnant Raiput wife to reside near the saint, and there three sons were born to her. Akbar. much beholden to the saint, regarded the place as lucky and decided to found a new city there. This city of Fatehpur-Sikri was begun in 1569 and completed in 1574, in the same year in which his Fort at Agra was completed. The city of Fatehpur-Sikri lies on a rocky outcrop, and its sandstone ramparts with bastions and gates enclose an irregularly rectangular area, which is open on the northwest, overlooking a vast reservoir and contains a vast range of halls, palaces, offices, gardens, pleasureresorts, baths, mosques and tombs. Its lay-out is determined by the rocky topography and consequently lacks a systematic pattern. Almost all the

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buildings here were raised by Akbar himself and are characterized largely by trabeate construction. The more important among them are described here.

The Diwān-i-Yām, or 'Hall of Public Audience', consists of a large quadrangle enclosed by cloisters, with the emperor's throne on the west, with a screened chamber for the use of the royal ladies. It is, however, the Diwān-i-Khāss, or 'Hall of Private Audience', which is of a unique design. It is a square chamber, with an opening on each side and a richly-carved column in the centre supporting a magnificent flower-shaped capital. From the circular top of the capital, four passages lead to the corners, and a passage runs right round the walls. It is believed that the central space was occupied by the emperor's throne, while his ministers sat at the corners or on the peripheral passage.

The socalled Turkish Sultana's house, whose fair occupant is unknown, consists of a small chamber surrounded by a verandah. It is beautifully carved both on the outside and inside; particularly remarkable is its wide dado carved with panels portraying jungle-scenes with animals, birds and trees. It is the most ornamented building in Fatehpur-Sikri, described as a 'gigantic jewel-casket' by Fergusson.

The Khwābgāh or 'Sleeping-chamber', a square apartment with a verandah covered by stones chiseled in imitation of tiles, was painted with panels and couplets composed by Salmān Sāwjī in praise of

the room and its occupants.

The Panch-Maḥal is a five storeyed pavilion, with each surmounting storey becoming smaller, so that the fifth storey consists only of a single kiosk. The tower was perhaps used for recreation by the emperor and the royal ladies.

Maryam-ki-Kothi ('Maryam's house'), also called Sunahiā-Makān, or 'Golden House', consists of a long rocm with three small rooms at its right angles on the ground floor, with the three rooms repeated on the first floor, and a verandah on three sides. One of the pillars in the verandah is carved with the figures of Rāma and Hanumān—Hindu gods, and the walls are covered with paintings and verses of Akbar's court-poet Faizi. The house is believed to have been occupied by the princess of Amber, who bore three sons to Akbar, including the heir-apparent, and who had the title of Maryamu'z-Zarrāni ('Mary of the Age').

Jodh Eäi's ralace, the largest domestic building at Fatehpur-Sikri, consists of a courtyard with suites of rooms on its four sides, the construction being double-storeyed in the middle of each side and at the corners. The entrance, through a forecourt, was from the east, while the western block served as a private chanel, with niches to house the images of

Hindu deities.

The socalled Birbal's house, or his daughter's house, which does not appear to have been built for or even occupied by either Raja Birbal, a favourite Hindu courtier and a minister, or his daughter, is another attractive building. Double-storeyed, with four rooms on the ground floor and two at the corners on the first floor, roofed by domes, it is richly ornamented with carved designs.

Close to a sar ā and on the bank of the reservoir stands a l.8-m. high mndīr, octaponal at the base, but circular and tapering above, which is studded with stenes in imitation of tusks. It is called Hiran-Minār ('Dear-tower'). Tradition avers it as the burial-place of AkFar's favourite elephant called Harūn, but it is more likely to have been the tower

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used for shooting the dear and other animals which came to the reservoir for quenching their thirst.

By far the grandest building at Fatehpur-Sikri is the Jami'-Masjid, which heralds the later planning of Shāhiahān's Jāmı'-Masud at Delhi (below, p. 321). It consists of a large quadrangle enclosed by cloisters and a prayer-hall faced with series of alternating wider and narrower arches and a row of pillared kiosks on the roof, with large domes behind them. The original entrance to the court-yard, is on the east through the Bādshāhī-Darwāza. Later, after Akbar's victory over the Deccan, was added the high gateway on the south, called Baland-Darwaza (pl. LXXX). Approached by a long flight cf steps and with a semi-octagonal projection containing a high arched alcove, through which three doors give access to the courtvard, it is perhaps the most imposing gate in India.

After the death, in 1571, of Shaikh Salim Chishti, his tomb was raised in the north-western corner of the compound of the mosque. Comprising a square chamber surrounded by a verandah screened with latticed panels of exquisite design, it is entirely of

marble and an elegant structure.

During the early years of Akbar's reign certain buildings were also constructed in Delhi, and he may have been interested even personally in some of them. Adham Khān, son of Māhem Anga, wet nurse of Akbar, and one of Akbar's generals, killed Ataga Khān, a minister and the husband of Ji Ji Anga, another wet nurse. This enraged Akbar who had Adham Khān thrown down from a terrace. Adham Khān's tomb at Mehrauli, built in 1562, is octagonal and is in the Lodi style, with the difference that it lacks the usual chhajja. Māhem Anga herself built in 1561-62 the Khairu'l-Manāzil mosque in

front of the Purānā-Qal'a. With its prayer-hall entered through five arches, three domes, doublestoreyed cloisters which served as a madrasa, stucco and glazed tile decoration, and an imposing gateway, it is an impressive structure.

Ataga Khān's tomb, built in 1566-67 in Nizamuddin, is a square chamber within a walled enclosure. Constructed of red sandstone, inlaid with marble and other coloured stones, and originally effectively ornamented with coloured tiles on the interior, with three recessed arches on the sides,

it is an architectural gem.

Outside Delhi and Agra, Akbar built citadels or forts at Ajmer and Allahabad and on the Hari-Parbat at Srinagar, the last re-introducing the use of stone in Kashmir. A mosque was also added by him close to Khwāja Mu'inu'd-Din Chistti's tomb at Ajmer. At Jaunpur, a fine bridge over the Gomati, with a pavilion over each pier, was built between 1564 and 1568. To his reign also belongs the tomb of Muhammad Ghauth, a saint and teacher, which was built at Gwalior about 1564 and combines the construction in the Lodi style with ornamentation of Gujarat tradition, as noticed particularly in its perforated screens.

E. JAHĀNGĪR (1605-27)

After Akbar's death in 1605, his son Salim by the Amber princess, ascended the throne at Agra under the name of Jahängir. By nature he was pleasure-loving and fond of natural beauty and was well-versed in Persian literature and even given to composing verses at times. Miniature-painting attracted him most, and, in fact, the development of Mughal painting owes in no small measure to his direct

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patronage. He had, however, little interest in architecture.

He spent the greater part of his life at Lahore and Kabul, and this may account for his interest in developing communications, by making roads and erecting kos-minārs ('mile'-stones), bridges and sarāis. Bārapula, a long bridge over a nālā in Delhi, belongs to his reign. A sarāi, called Nür-Maḥal, in Jullundur district, along the old Grand Trunk Road, contains an impressive gateway.

The construction of his own tomb by Akbar at Sikandara near Agra had been going on for three vears when death overtook him. Jahangir did not like its design and changed it. He completed the tomb in 1613, in the seventh year of his reign. The tomb lies in the centre of a large garden enclosed by battlemented walls, and divided into squares and provided with channels and fountains in the fashion of Mughal gardens. An imposing gateway, built with sandstone but profusely decorated with inlay of marble and other coloured stones rises from the middle of each side, actual entrance being had only from the gateway on the west, others being closed. The main entrance is provided with tall minars on the corners. a feature to be seen for the first time in Mughal monuments.

The tomb proper rises from a raised terrace of red stone with façades of series of arches, broken by a marble gateway, one of which leads to the grave proper. Above the terrace the building is in four storeys, the lower three consisting of pillared arcades, on the top of which the tomb is enclosed within marble cloisters closed on the outside by latticed screens. On the tomb is inscribed the formula of the faith promulgated by Akbar and the ninetynine attributes of God. With its solid wide

base, but with open arcades and truncated top, the tomb lacks coherence. Outside the enclosure of the tomb the now-derelict Kānch-Maḥal, a double-storeyed building, was also built by Jahāngir; it shows evidence of an effective decoration achieved by the combined use of enamelled tiles and coloured

inlay of stones.

The Muthamman-Burj, a double-storeyed pavilion in the Agra Fort, with beautiful inlay, is also ascribed to Jahangir. But the most important building of his reign is the tomb of I'timādu'd-Daula, begun in 1622 and completed in 1628 by his queen, Nurjal an, to inter the bodily remains of her father, Mirzā Ghiyāth Baig, who rose to become the high chamberlain and prime minister to Jahangir. within a small garden-enclosure, with an entrance of sandstone, it is a square building with a gravechamber surrounded by verandahs. On the upper storey a pavilion with rectangular dome and screens on the sides enclosed the false graves of I'tımadu'd-Daula and his wife. The entire structure is in marble and is richly decorated with delicate inlay and paintings containing the characteristic Persian motifs, such as cypress trees, vases, fruits, vines and wine-cups. The tomb occupies an important place in the development of garden-tombs and reveals a phase of transition between the two great epochs of Mughal architecture, that of Akbar and Shahjahan. Akbar's sandstone has here given place to marble, but his subdued proportions and restrained ornamentation still linger on, while the central flattish dome raised on a rectangular base savours of Raiput architecture. The minarets on the four corners, although short, and the fine latticework, traceries and inlay herald the techniques employed so effectively by Shāhjahān in the Tāj-Mahal (below, p. 318).

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In Delhi certain monuments were raised towards the later part of Jahangir's reign. The Chaunsath-Khamba ('Sixtyfour Pillars') in Nızamuddin, with its sixty-four pillars, was built as his tomb Mirzā 'Aziz Kokaltāsh, son of Ji Ji Anga and Ataga Khān, in 1623-24, during his lifetime. Bairam Khān's son, Mīrzā 'Abdu'r-Rahīm Khān-i-Khānān, who served both Akbar and Jahangir and was a scholar knowing several languages writing couplets in Hindi under the familiar name of Rahim, lies buried in a massive tomb close to Nizamuddin. Originally faced with red sandstone, relieved by the use of buff sandstone and marble, its design is similar to that of Humāyūn's tomb, its interior decorated with incised and painted plaster. The tomb is now bereft of its facing, as these stones were stripped off later to build Safdar-Jang's tomb (below, p. 324).

At Srinagar in Kashmir, Nürjahān built the Patthar-Masjid, while Jahāngir engaged himself in arranging the gardens. Jahāngir also added to the fort at Lahore. He died in 1627 on his way back from Kashmir, and his tomb at Shahdara near Lahore

was built later by his devoted queen.

F. Shāhjahān (1628-58)

Jahāngir died in 1627, but Shāhjahān ascended throne only in 1628, after Dāwar Bakhsh, son of Khusraw, Shāhjahān's elder brother, had ruled for a while and other rivals had been put out of the way. Shāhjahān inherited the artistic taste of his father, but his interest went beyond. It was architecture which gripped and gratified him and remained his life-long passion.

By the time Shāhjahān came to the throne, the Mughal empire had at its back almost a continuity

of just over a century, during which the artistic traditions had become mature and refined. To these were added Shāhjahān's personal interest and patronage, and the result was a remarkable efflores

cence of architecture.

Shāhjahān preferred marble to other stones. His buildings are characterized by a form and feeling of feminity, sensuousness and delicateness, as distinct from the sturdy, robust and relatively plain appearance of the constructions of Akbar. Ornamentation, therefore, naturally plays a dominant rôle in his buildings. The chaste and simple relief-work on the red sandstone now gave way to delicate carvings in marble, almost like filigree, and to fine inlay and painting. The arch became foliated, and the dome received a Persian form, bulbous in outline and constricted at the neck. The pillars are raised with shafts resting on foliated bases and crowned by involuted bracket-capitals.

Shāhjahān replanned the forts at Lahore and Agra and added several buildings within them. In the latter, he even demolished some buildings of sandstone and replaced them by marble ones. The Khāss-Maḥal, Machchhī-Bhawan, Diwān-i-Yam, Diwān-i-Khāss and Moti-Masjid are some of the buildings erected by him in that fort. They are all in marble, displaying tapering shafts, engrailed arches and beautiful relief and inlay-work in

coloured stones.

The Khäss-Mahal ('Private Palace'), built about 1636, overlooks the river and consists of an open pillared pavilion, with five bays in front and three on the sides, flanked by a pavilion each on the north and south, their middle portion covered by 'Bengal' roofs. The courtyard of the Machchhi-Bhawan ('Fish Palace') is enclosed on three sides with arched

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double-storeyed chambers, with a screen on the riverside. It is said that originally it had marble tanks, which contained fish of gold and silver colours, from which it derives its name.

The Diwān-i-Ām ('Hall of Public Audience') is a large rectangular courtyard with entrances on the north and south, series of cells on three sides, and with a pillared hall in the middle of the fourth western side. The Diwān-i-Khāss ('Hall of Private Audience'), built in 1634-37, consists of an outer hall and an inner hall, communicating with each other through three archways. The three-domed Moti-Masjid ('Pearl Mosque'), which took Shāh-jahān seven years to build at a cost of three lakhs of rupees, is by far the noblest building erected by him in the Agra fort. It rises from a vaulted terrace and contains cloisters on three sides and a marble praver-hall on the west.

About the same time that Shāhjahān built his Jāmi'-Masjid in Delhi (below, p. 321), he also constructed in 1648 the Jāmi'-Masjid at Agra, in honour of his daughter, Jahānārā. It follows the conventional pattern but is half the size of the Delhi mosque. With four-centred arches in place of the usual foliated ones, low domes inlaid with black marble stripes on herring-bone pattern, slender pinnacles flanking the entrance to its prayer-hall, a row of kiosks above the parapet, and without minarets, it looks distinguished but stands no comparison with the Jāmi'-Masjid at Delhi.

The highest of Shāhjahān's achievements, however, is the Tāj-Maḥal (pl. LXXXI), tomb of his beloved wife Arjmand Bānū Begam, entitled Mumtāz Maḥal. She died at Burhanpur in 1631, during his campaign in the Deccan and her body was brought to Agra. At the emperor's order, several designs were received

for the tomb, but the one accepted is said to be by Ustad 'Isa, a master-builder from Persia. The tomb was commenced by Shahjahan about 1632, before beginning his constructions in the fort, and took him seventeen years to complete according to some and twentytwo according to others.

The Tāi-Mahal is the culmination of the conception of a garden-tomb, which had a modest beginning in Sikandar Lodi's tomb, but had advanced to a mature stage in Humāyūn's tomb, both at Delhi (above, pp. 260 and 305). Lying on the left bank of the Yamuna, its rectangular enclosure walled up on three sides, the marble tomb occupies the middle of the fourth side, along the river, with a red sandstone mosque on the west and a matching hall. described as ian ab or 'answer', on the east, the latter to serve as a guest-house (mihmān-khāna) or assembly-hall (majlis-khāna). The square tomb with chamfered corners is built on a raised terrace, with graceful tall minarets at its four corners. As in the Humavun's tomb, the tomb-chamber is octagonal, with subsidiary chambers at the angles. This plan is repeated on the second storey, and the building is surmounted by a graceful double dome. In the basement are the graves of Mumtaz Mahal and Shahiahan, enclosed within railings of beautifully worked perforated screens.

The Tāj is noted for its graceful proportions and the satisfying balance between the claims of architecture and ornamentation. The profuse use of semi-precious and multi-coloured stones in its floral and arabesque patterns, fine borders, inscriptions in black marble, low relief-carvings, delicate traceries and trelliswork, all executed in or against the background of white marble, lend a unique charm to this world-famous edifice.

charm to this world-ramous edifice

In 1638 Shāhiahān transferred his capital from Agra to Delhi and laid the foundations of Shahjahānābād, the seventh city of Delhi. It is enclosed by a rubble stone wall, with bastions, gates and wickets at intervals. Of its fourteen gates, the important ones are the Mori, Lähori, Aimeri, Turkman. Käshmiri and Delhi gates, some of which have already been demolished. His famous citadel. the Lal-Oal'a, or the Red Fort, lying at the town's northern end on the right bank of the Yamuna and south of Salimgarh (p. 303), was begun in 1639 and completed after nine years. The Red Fort is different from the Agra fort and is better planned, because at its back lies the experience gained by Shahjahān at Agra, and because it was the work of one hand. It is an irregular octagon, with two long sides on the east and west, and with two main gates. one on the west and the other on the south, called Lähori and Delhi gates respectively. While the walls. gates and a few other structures in the fort are constructed of red sandstone, marble has been largely used in the palaces.

From the western gateway after passing through the vaulted arcade, called Chhatta-Chowk, one reaches the Naubat- or Naggar-Khana ('Drumhouse'), where ceremonial music was played and which also served as the entrance to the Diwan-i-'Am. Its upper storey is now occupied by the Indian War Memorial Museum.

The Diwan-i-'Am ('Hall of Public Audience') is a rectangular hall, three aisle deep, with a facade of nine arches. At the back of the hall is an alcove, where the royal throne stood under a marble canopy. with an inlaid marble dias below it for the prime minister. The wall behind the throne is ornamented with beautiful panels of pietra dura work, said to

have been executed by Austin de Bordeaux, a Florentine artist. Orpheus with his lute is represented in one of the panels here.

Originally there were six marble palaces along the eastern water front. Behind the Diwān-i-'Am but separated by a court is the Rang-Maḥal ('Painted Palace'), so called owing to coloured decoration on its interior. It consists of a main hall with an arched front, with vaulted chambers on either end. A water-channel, called the Nahr-i-Bihisht ('Stream of Paradise'), ran down through it, with a central marble basin fitted with an ivory fountain. The Mumtāz-Mahal, originally an important apartment in the imperial seraglio, now houses the Delhi Fort Museum.

The Diwān-i-Khāss ('Hall of Private Audience') is a highly-ornamented pillared hall, with a flat ceiling supported on engrailed arches. The lower portion of its piers is ornamented with floral piera dura panels, while the upper portion was originally gilded and painted. Its marble dias is said to have supported the famous Peacock Throne, carried away by the Persian invader Nādir Shāh.

The Tasbih-Khāna ('chamber for counting beads for private prayers') consists of three rooms, behind which is the Khwābaāh ('sleeping-chamber'). On the northern screen of the former is a representation of the Scales of Justice, which are suspended over a crescent amidst stars and clouds. Adjoining the eastern wall of the Khwābgāh is the octagonal Muthamman-Burj, from where the emperor appeared before his subjects every morning. A small balcony, which projects from the Burj, was added here in 1808 by Akbar Shāh II, and it was from this balcony that King George V and Queen Mary appeared before the people of Delhi in December 1911.

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The Hammām ('Bath') consists of three main apartments divided by corridors. The entire interior, including the floor, is built of marble and inlaid with coloured stones. The baths were provided with hot and cold water, and it is said that one of the fountains in the easternmost apartment emitted rosewater. To the west of the Hammām is the Moti-Masjid ('Pearl Mosque'), added later by Aurangzeb (below, p. 323). The Hayāt-Bakhsh-Bāgh ('Lifegiving garden'), with its pavilions, lies to the north of the mosque, and was later considerably altered and reconstructed. The red-stone pavilion in the middle of the tank in the centre of the Hayāt-Bakhsh-Bāgh is called Zafar-Maḥal and was built by Bahādur Shāh II in about 1842.

In 1644, Shāhjahān commenced in Delhi his great mosque, the Jāmi'-Masjid, the largest mosque in India, and completed it in 1650. Its square quadrangle with arched cloisters on the sides and a tank in the centre is 100 m. wide. Built on a raised plinth, it has three imposing gateways approached by long flights of steps. Its prayer-hall, with a façade of eleven arches, flanked by a four-storeyed minaret on either end, is covered by three large domes ornamented with alternating stripes of black and white marble.

Among other buildings of Shāṇjahān's reign in Delhi, important for their association with the royal family, mention may be made of the tombs of Jahānārā and Raushanārā, his daughters. Raushanārā laid out her garden-tomb in 1650, soon after her father had completed Shāṇjahānābād. Jahānārā's tomb in Nizamuddin, built by her in 1681 during her lifetime, consists of an unroofed small enclosure, the walls of which are screened with perforated marble slabs. The hollow receptacle on the upper surface of the grave is filled with grass in

accordance with the inscription on it, reading 'Let naught cover my grave save the green grass: for grass well suffices as a covering for the grave of the lowly.' One of the wives of Shahjahāha, Fatehpuri Begam, built in 1650 the famous Fatehpuri mosque

in Delhi on the conventional pattern.

Enamelled tiles, which had gained roots at Lahore as the main decorating medium, also penetrated to Agra, as seen in the Chini-kā-Rauza, tomb of Afzal Khān, built during Shāhjahān's reign. At Srinagar in Kashmir, where stone had been brought into use again, in about 1649 was built the Akhund Mullā Shāh's mosque, with brick core and grey grante facing. Kashmir was, however, enriched by Shāhjahān by laying terraces in the Shālimār and Nishāt gardens.

G. Aurangzeb (1658-1707)

Aurangzeb imprisoned his father Shāhjahān, and crowned himself as emperor at Delhi in July 1658, at the Shālimār garden, which contains now only some derelict buildings with patches of floral After gaining victory over his other three brothers or killing them, he celebrated a second coronation in June, 1659, again at Delhi, Mughal empire, however, had now started disintegrating, owing to his puritanical beliefs, bigoted behaviour and other external factors. The cultural and intellectual enterprises suffered still worse. With his accession, architecture and fine arts succumbed to a deterioration and oblivion, from which they were never to emerge during the rule of the Mughals. This was no doubt due in a substantial measure to the dislike of arts by the emperor himself.

Shāhjahān's disposition and that of Aurangzeb form a study in contrast. While Shāhiahān joined his subjects in festivities and prayers, and his Jāmi'-Masjid at Delhi was used both by him and his people, Aurangzeb led an isolated life, withdrawing his whole self unto himself. In the Red Fort at Delhi, he built in 1659-60 the small Moti Masiid ('Pearl Mosque') for his private use. At Agra, the Nagina-Masjid ('Gem Mosque') is also said to have been built by him, for the same purpose, although some authorities would ascribe it to Shāhiahān himself. The Moti-Masiid, entirely of marble, follows the conventional pattern. With its white surface relieved by borders and other designs in black marble, it is no doubt a dainty masterpiece, although its three domes, originally gilded with copper, are perhaps a little too rounded and interfere with its look. Aurangzeb also made some additions to the forts at Delhi and Agra, such as the barbicans in front of the gateways at the former.

The beauful Zinatu'l-Masājidin Delhi, built by Aurangzeb's daughter, Zinatu'n-Nisā Begam, perhaps in about 1711, after her lather's death, may be noticed here. Much smaller than the Jāmi Masjid built by her grandfather, it resembles it all the same, with its red sandstone facing, white marble domes with black marble flutines and tall munarets.

The reign of Aurangzeb falls into two periods. During the first half, his activities and interests were concentrated in the north; in the second half, his court and family moved to Aurangabad, from where he directed his campaigns in the Deccan. In fact, Aurangabad, was now called the 'Delhi of the South'. To this period belongs the Bibi-kā-Maqbara or the tomb of Rābi'atu'd-Daurāni, Aurangzeb's wife, which was built in 1678 by her son. It

is candidly a replica of the Tāj-Maḥal, a little more than half its size, but the result is highly unsatisfying, if not mediocre, on account of its inelegant proportions and exaggerated embellishment. Its screen enclosing the grave, however, is very finely carved with competent workmanship.

H. THE LATER MUGHALS (1707-1857)

Aurangzeb died in 1707, and the Mughal empire now disintegrated fast, although the successors of the great Mughals continued reigning over the dismembered dominions till 1857. This period was marked by mutual dissensions, gradual entrenchment of foreign powers and raids by the Persian adventurers Nādir Shāh and his successor in Afghanistan, Ahmad Shah Durrani, The kings had neither the resources, nor inclination, to erect any major monuments. The only exception is provided by the tomb of Mirzā Muqim Abul-Mansūr Khān. entitled Safdar-Jang, who was the vicerov of Oudh under Muhammad Shāh (1719-48) and later on prime minister under Ahmad Shah (1748-54), The tomb was built in about 1754 by Shujā'u'd-Daula, Safdar Jang's son. The tomb is the last example of the pattern which began with Humavun's tomb. Enclosed within a large garden, divided into squares on the charbagh pattern, with tanks and fountains along the central pathway, with a gate on the east and pavilions on the other three sides. the tomb proper stands out in the centre of the enclosure. It is a square double-storeyed structure built on a raised terrace and surmounted by a bulbous dome of marble. Red and buff sandstone has been used in its facing, a large proportion of which was stripped off from 'Abdu'r-Rahim Khān-i-Khānān's tomb (above p. 315). The marble panels on

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its corner-towers are pleasing but rather florid. In fact, its exaggerated ornamentation and lack of proportions, evidenced particularly by its vertical elevation, rob it of the character of a great building, although it has been rightly described as 'the last flicker in the lamp of Mughal architecture at Delhi'.

6. MONUMENTS OF THE NAWABS OF OUDH AND SULTANS OF MYSORE

Late in the eighteenth century, the Nawabs of Oudh became independent, bound by certain treaties with the British, and the centre of political power shifted to that quarter. So did the patronage of arts, architecture and literary pursuits. At Lucknow, which was the capital of Oudh, numerous buildings were erected by the Nawabs. They fall into two phases: an earlier one which succeeded the declining Mughal style of Delhi, and a later one which also incorporated certain features of European architecture. In both, brick was the main building material, while ornamentation was executed in plaster. To the earlier phase belong the Imambara, with its mosques, courts and gateways, all built by Nawab Āsafu'd-Daula (1775-95). These buildings are spacious and impressive, but their ornament is too florid. The second phase was inspired by a chateau built in a bizarre European fashion by General Claude Hastin (1735-1800), a French adventurer in the employ of the Nawabs. From it the Nawabs incorporated triangular pediments, Corinthian capitals, and circular Roman arches, and combined them with the indigenous fluted domes, ogee arches and arabesque patterns. Buildings in this hybrid character are the Chhattar-Manzils and the gateways to Sikandara-Bagh and Kaisar-Bagh.

In south India, at Mysore, where Haidar 'Ali, the chief minister of the Hindu kingdom, had usurped the throne in 1761, some monuments were erected by his son, Tipū Sultan, in a distinct style which deserves mention. It is characterized by engrailed arches, octagonal multi-storeyed minarets, turrets of the same appearance and a hemispherical but flattened dome, with a frieze of petals at the neck. The Darva-Daulat-Bagh contains a pavilion of graceful proportions with mural paintings and served as a place of retreat. The Gumbaz, where Haidar 'Ali, and Tipū Sultan and his mother lie buried, is a square structure, surrounded by a corridor, with minarets at the corners and a typical dome in the centre with turrets around it. The Jāmi'-'Masiid in the fort also contains typical minarets, with numerous pigeon-holes disposed over its body.

7 OTHER FORTS AND PALACES

Not many palaces of the early Hindu rulers of medieval times have survived. It is clear, however, that certain features which characterize the Islamic construction were not confined merely to Muslim forts, palaces, mosques and tombs, but were also incorporated by the Hindus, who also made use of some of the indigenous features, and planned their buildings to suit their customs and ways of living.

Rajasthan, central India and parts of south India are rich in such palaces. Among the pre-Mughal Hindu palaces the only one of note is the Mān-Mandir in the fort at Gwalior built by Raja Mān Singh (1486-1516). Stuated ast is on a cliff, the long façade of the fort broken by circular towers at regular intervals crowned with domed cupolas, the principal ones among which were originally gilded by copper,

OTHER FORTS AND PALACES

it is at once striking (pl. LXXXIIA). Balconied windows with their roofs finishing insmall pyramidal tops and arcades of sunk corbelled arches, the whole surmounted by a running chhajja, are other features of its façade. Within, the courtyards have beautifully carved corbelled openings, corrugated roofs, and glazed tiles of Hindu designs. The rooms are, however, small. Båbur was impressed only by this one among the Hindu palaces, and Akbar no doubt borrowed some of the architectural features from it.

The palaces built during the Mughal times may be different from each other in plan, but they have certain common architectural features, such as balconies supported on carved brackets, pillared kiosks crowned by domes, arcades of sunk arches, foliated arches, latticed screens, curved 'Bengal' eaves and flat domes rising from a rectangular base. Situated as these palaces often are on rocky heights, they look very impressive. Among the important palaces may be named those at Amber, Jaipur, Bikaner, Jodhpur, Udaipur, Jaisalmer, Orchha and Datia.

In south India, the Islamic principles of construction penetrated into the Hindu palaces much more gradually. At Hampi, the capital of the Vijayanagara kingdom, about 1575 was built the double-storeyed pavilion called the 'Lotus'-Maḥal on a square plan with double recesses at the corners. While its pillars and concentrically recessed arches are Islamic, the pyramidal roofs of its pavilions, chhajjas and stucco decoration are Hindu. The three-storeyed palace at Chandragiri (pl. LXXXII B), butle tarly in the seventeenth century, is much larger; but here again, the façade has series of arches, while towers at the corners and above the entrance are pyramidal. The palace of Tirumala Nāyaka (1623-59), at Madura, contains aisles of massive round columns derived

from European architecture. Although impressive, it hardly possesses dignity or coherence.

Y. D. SHARMA

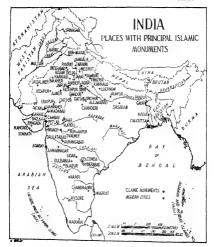


Fig. 5

IX. MUSEUMS 1

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1. INTRODUCTION

The Museums in India have a marked bias in Favour of archaeological material: out of a total number of somewhat less than two hundred museums, more than one hundred are meant either exclusively or largely for antiquarian exhibits. The earliest museums, however, had no such predilection, specially in their initial years, when collections pertaining to geology

¹ For places where museums are located see map, fig. 6, p. 355.

and natural history took the place of honour. Writing in 1936, Markham and Hargreaves observed: 'This bias (for archaeology) is understandable when we realise the pride that the cultured Indian takes in the history of his country, and the comparative ease with which archaeological material can be secured.' The statement cannot be regarded as wholly correct: actually, the bias was the outcome of certain trends of historical circumstances and was by no means the sole precondition for the growth of museums in the country. The awareness of the Indian people of their proud cultural heritage is itself a historical phenomenon born out of the endeavours of a few European savants in the late eighteenth and nineteenth centuries, at times promoted by other factors; had this awareness been present earlier, India would certainly not have waited for a Jones and a Cunningham for the inauguration of her oriental studies and archaeological pursuits. Furthermore, the easy availability of material does not by itself presuppose museums to house it unless favourable factors for their growth are present. In fact, disjecta membra of ancient monuments as well as detached archaeological remains abounded on the soil all the while; yet no museums had been organized before the introduction of new ideas. This was because that the concept of preserving objects as relics of the past, as the epitome of national glory, did not exist earlier even in a dormant state. This and many other allied trends come out in relief once the history of museums in India is traced.

2. GROWTH OF MUSEUMS

A. EARLY PHASE (1784-1857)

Ancient literature no doubt speaks of chitraśālā (picture-gallery), etc. Also there are records of royal

GROWTH OF MUSEUMS

antiquarians like Fīrūz Shāh Tughluq (1351-88), who went to the extent of bringing two colossal Asokan pillars from distant places to his capital, Delhi, Yet museums as one understands today did not exist either in ancient or medieval India. The foundation of great museums in some European capitals in the second half of the eighteenth and early nineteenth centuries must have inspired the building of museums on those lines at the important centres of British administration in India. In fact, the first museum-collection in India dates as long back as 1796-only forty years after the inception of the British Museum in London and three years after France had thrown open the palace of the Louvre as the museum of the Republic-an act that thrilled the world. In that year, 1796, the Asiatic Society (later on successively called the Asiatic Society of Bengal and the Royal Asiatic Society of Bengal and now again the Asiatic Society), founded in Calcutta in 1784 by a band of enthusiasts led by the brilliant scholar Sir William Jones, felt the need to house the many 'curiosities' that had accumulated as a result of the collection of archaeological, ethnological, geological and zoological specimens by its members. But it was not until 1814 that the Society was able to establish a museum, and that was because in that year Dr. Nathaniel Wallich, a Danish botanist, offered his honorary services as the curator and thus became the first curator of the first museum in India. The Asiatic Society Museum then had two sections-the first dealing with archaeology, ethnology and technology under the care of the librarian of the Society and the second with geology and zoology under the charge of Wallich: the second section, specially the zoological part of it, had a rapid growth. It was only since 1862 -a year after the formation of the Archaeological

Survey of India—that archaeology came to the fore in the Museum, thanks to Sir Alexander Cunningham whose indefatigable zeal in the collection and study of archaeological material not only greatly augmented the archaeological collection of the Museum but also aroused widespread interest in Indian archaeology. It is this Asiatic Society Museum that provided the nucleus of the Indian Museum founded under the Indian Museum Act, 1866, though the present building in Chowringhee was made available later on, in 1875.

An effort to build up a museum in Madras had been made as early as 1819, but with hardly any result. In 1843 the Madras Literary Society, a branch of the Royal Asiatic Society, requested the Government to form a museum of economic geology. The Court of Directors of the East India Company agreed to this proposal, and the Central Museum, originally intended to be a real 'central' museum with branches, was opened in 1851 at the College of Fort St. George. wherefrom it moved to the present building of the Museum in Egmore in 1854. The personal enthusiasm of Assistant Surgeon Edward Green Balfour, who offered his services to be the officer-in-charge in 1850. was mainly responsible for the rapid growth of the Museum, which, by 1856, had established six local museums; but all of them except one had to be closed down within five years of their birth.

During this period, about a dozen museums, including those of Bombay and Karachi, the latter now in Pakistan, came into being. Their growth was largely due to the initiative of European individuals, often backed by the Government, which enabled them to come up and survive. Impetus for their emergence in the fifties of the century was also provided by the Great Exhibition of 1851 in London. By and large these museums had no special bias for archaeology,

GROWTH OF MUSEUMS

which formed only a part of their total collection, the emphasis being generally on geology and other natural sciences, and this was motivated to a great extent by the necessity of assessing the natural wealth of the country; they were essentially research-museums, the concept of public museums being then far off.

B. PARTICIPATION OF INDIAN STATES (1857-98)

This period is notable for the fact that for the first time the rulers of Indian States came forward to participate in the museum-movement; ten out of the sixteen museums that sprang up during the period owed their origin to the munificence of such rulers. Maharaja of Travancore patronized the building up of a museum at Trivandrum in 1857; shortly afterwards, in 1866, Mysore organized one at Bangalore. soon as the repercussions of the upheaval of 1857 were over, two museums in British India were established in 1863, one at Lucknow and the other at Nagpur. A fresh impetus both in the British territory and in the Indian States was provided by the celebration of the Jubilee of Queen Victoria in 1887; the museums at Jaipur, Udaipur, Rajkot, Vijayawada, etc., were its outcome. The starting of the Raipur Museum in 1875 out of the gift of Mahant Ghasidas, Chief of Nandgaon, shows, however feebly, the rising public interest in the movement.

Amongst the museums of this era, the one at Mathura (later on the Curzon Museum of Archaeology and now the Museum of Archaeology), started in 1874 by F.S. Growse, stands as a landmark in the history of the archaeological museums in India, as this was the first museum housing exclusively archaeological relics derived from a particular region and may be therefore regarded as the forerunner of the

'local museums' that became a conspicuous feature in the succeeding period.

C. FROM CURZON TO MARSHALL (1898-1928)

The arrival of Curzon as Viceroy in 1898 and the the appointment of John Marshall as the Director General of Archaeology in India in 1902 opened a new era in the history of museums in India, which resulted in creating not less than thirty museums-all with an entirely archaeological orientation-spread all over India. The Archaeological Survey of India itself founded local museums at Sarnath (1904). Agra (1906), Aimer (1908), Delhi Fort (1909), Bijapur (1912), Nalanda (1917) and Sanchi (1919), besides others-some of them now in Pakistan. Markam and Hargreaves observe: 'It has been the policy of the Government of India to keep the small and movable antiquities, recovered from the ancient sites, in close association with the remains to which they belong, so that they may be studied amid their natural surroundings and not lose focus by being transported. This commendable practice, prevalent also outside India, has had its continuity in the post-Independence period, in spite of occasional and ill-informed criticism, In 1939 Sir Leonard Woolley recommended the closing down of the most of the local museums maintained by the Archaeological Survey of India, but the Government of India did not rightly agree to this.

A new tendency in the form of organizing museums in learned societies made its appearance: museums of the Bangiya Sahitya Parishad, Calcutta (1910), Bharatiya Itihasa Samshodhak Mandal, Poona (1910), and Andhra Historical Research Society, Rajahmundry (1928), belong to this category. Further, the Indian States went ahead with the starting of museums in their respective resions.

GROWTH OF MUSEUMS

The origin of the museums of this period may be ascribed to four different sources of patronage, viz., (i) Government (generally the Archaeological Survey of India), (ii) the Indian States, (iii) learned societies and (iv) civic bodies and private individuals. The participation of European individuals was no longer a factor to be reckoned with.

Three out of the four above-mentioned sources combined to give birth to the Prince of Wales Museum of Western India in Bombay. In 1904, the Government of Bombay appointed a committee to examine the question of having a museum for the city. In 1905, the people of Bombay decided that a public museum should be a fitting permanent memorial to the visit to the city of their Royal Highnesses the Prince and Princess of Wales. The site on which the present Prince of Wales Museum stands was given by the Bombay Government, which also assured yearly grants. The Bombay Municipality constituted a fund of 300,000 rupees for its running. Sir Currimbhoy Ibrahim added to it an equivalent sum and Sir Cowasji Jehangir 50,000 rupees as their donations. The Museum was thrown open to the public in 1921.

D. PERIOD OF POPULAR PARTICIPATION (1928-47)

Out of about three dozen museums that came into being between 1928 and 1947, about a dozen owed their origin exclusively or largely to the efforts of the private organizations or individuals. By then the museum-movement had taken its roots in the scil and despite a world-wide depression, which hit the Archaeological Survey hard, and the Second World War, the period produced a fairly rich crop of museums. The Indian States were again at the fore and gave rise to at least

seventeen museums. More museums in the premises of the learned societies, such as the Rajwade Samshodhan Mandal (1932) and Kannada Research Society (1904), were set up. It is interesting to note that the collection of the Kamarupa Anusandhan Samiti. Gauhati, and the collections of two professors of the Ravenshaw College, Cuttack, eventually grew into the Provincial Museums of Assam and Orissa respectively. Municipalities and other civic and corporate bodies also rose to the occasion and accelerated the nace of the movement. Universities did not lag behind, the first university museum of archaeology being the Asutosh Museum of Fine (now Indian) Art founded in 1937 by the University of Calcutta.1 Another new aspect was the rise of temple museums in the south under the patronage of the Devasthanam Committees: one such museum, organized in 1935, is Sriranganathasvami etc. Devasthanam's museum at Srirangam. All these developments show that in the growth of the archaeological museums during this period the Government, or more precisely the Archaeological Survey of India, was not the only participant. Markham and Hargreaves are right in stating: 'The discoveries of the Archaeological Survey, by adding so substantially to the history of India and awakening world-wide interest in its art and antiquities, have stimulated in no small measure feelings of nationalism and directed the attention of Indians to the need for preserving their archaeological treasures, which generally have added virtue of being more pest-resistant than most material.' The seed that had been sown in the preceding period thus started reaping fruits in this. which witnessed, as well, the mass-awakening in

It may be mentioned here that the first college museum in India was set up by the pioneer missionary William Carey at Scrampore, West Bengal, as early as 1818.

GROWTH OF MUSEUMS

India; perhaps the museum-movement reflects something of that national upheaval.

During this period the Archaeological Survey, once the pioneer in the movement, played a subdued rôle, largely owing to financial difficulties; notable, however, is the organization, in 1929, of the Central Asian Antiquities Museum (now merged with the National Museum) at New Delhi, formed out of the collections of Sir Aurel Stein from his expeditions to Chinese Turkestan. The closing years of this period, with the coming of Dr. (now Sir) Mortimer Wheeler as the Director General of Archaeology in India, brought indications of a great change—the centralization of direction in local museums of the Archaeological Survey of India and the proposal for the formation of a National Museum of Art, Archaeology and Thus, the recommendations of the Anthropology, Markham-Hargreaves report that the museums of the Archaeological Survey of India should be brought together under one administrative control was given effect to in 1946, when a Museums Branch came into existence within the Survey. This was a great contribution to an expanding movement, which, together with infusion of the idea of a National Museum, was then practically on the threshold of a revolutionary change. 'The question of the fomation of a National Museum of India', says Ghosh, 'had been sporadically receiving the attention of the Government for a long time. The first effective step towards the establishment of such a museum was taken in 1945, when, on the initiative of Wheeler, a committee, with Sir Maurice Gwyer as the Chairman, was set up to report on the functions, administration, organization, etc., of the Museum. The committee reported in 1946, and from then to 1949. when the Museum inaugurated, Wheeler and his successor vigorously

pursued the matter so that it was not shelved once again.'

E. Post-Independence period (1947-63)

The greatest event of this period is the formation or recognition of the National Museums in India. now altogether three in number. Of the three, the first to be constituted was the National Museum. New Delhi, under the aegis of the Archaeological Survey of India. In 1948, an exhibition of objects which had been taken to a London exhibition a year earlier took place in New Delhi. This formed the nucleus of the National Museum, which was declared open on the 15th August 1949. The task of nurturing the new organization fell on the Archaeological Survey of India, which continued to be responsible for it till 1958, when the Museum became an independent institution. Two other museums, the Indian Museum, Calcutta, and the Salarjang Museum, Hyderabad, have recently been given the status of National Museums.

Apart from these National Museums, more than thirtyfive archaeological museums have been founded in the post-Independence period. These include local museums of the Archaeological Survey of India, the establishment of which received a fresh fillip—three museums near ancient sites (Amaravati, Kondapur, and Bodh-Gaya) and four more near temple-sites or within palaces or forts (Hampi, Fort St. George, Madras, Halebid and Seringapatam) were organized between the years 1948 and 1963. Of them, the one at Kondapurwastaken over from the Hyderabad Governent; the Fort St. George Museum mainly houses objects of the early British period in the south, and the one at Seringapatam relics associated with TipūSultan.

GROWTH OF MUSEUMS

A few more museums at excavated sites like Rupar, Lothal and Ratnagiri are likely to be set up within the next few years. The existing university museums, art-galleries, temple museums, historical museums, etc., likewise, have received support both from the Government as well as from the public.

But the greatest change that has been ushered in during this period is the change in outlook, the growing realization that the physical growth of museums is not an end in itself; the qualitative aspects that aspire to democratize these institutions are now receiving greater emphasis. Every effort is being made to re-organize the museums on modern lines with improved methods of display, etc. The conception of public museums-museums as a means of general education-is now fast gaining ground. For the first time museology as a subject is being taught in some universities in India: training abroad is also receiving attention. The Government of India is providing each year grants-in-aid to museums for extensions to buildings and general improvements. publications. Above all, the National Museum, New Delhi, is engaged in setting up an example of an ideal public museum with all modern ideas of effective display and educational facilities.

3. IMPORTANT MUSEUMS

It is evident from the foregoing that present-day India has different types of archaeological museums, controlled and financed by different categories of administrative bodies ranging from the Central Government to temple-committees. On grounds of administrative control and finances, they may be divided broadly under seven categories, viz., the National Museums, State Museums, local museums under the

Archaeological Survey of India, museums under the control of civic or corporate bodies, museums of learned societies and university museums. There are other museums with a local character, of which the Art-gallery at Thanjavur houses a number of excellent south Indian bronzes (pl. XCV) and stone sculptures. A brief description of the salient features of the representative museums under each category is given below. Out of consideration of space and the relative unimportance of the collections a large number of museums have not been mentioned.

A. THE NATIONAL MUSEUMS

Indian Museum, Calcutta (1814)1.-The Archaeological Section of the Museum represents the finest and the largest collection of archaeological and historical material in India. Its enormous collection of Stone Age tools from all over India, including that of the Yale-Cambridge Expedition of 1935, and excavated finds from Harappa, Mohenjo-daro and other chalcolithic sites in Sind and megalithic sites from the south, besides a portion of the copper-hoard from Gungeria, offer an important, even indispensable, source for prehistoric and protohistoric studies. It is remarkably rich in sculptures ranging in date from the third century B.C. to the late medieval period-the bullcapital (pl. LXXXIV) from Rampurwa (now in the Rashtrapati Bhawan, New Delhi), the kalpa-druma capital, Srf-Lakshmi and the yakshas from Patnaare some of the priceless pieces of the early series. In a separate gallery are housed the re-assembled stunarailings and one of the four gateways of the Bharhut

Numerals within bracket indicate the date of establishment of the respective Museum.

stūpa (pl. LXXXV A). There is no other museum in India where there is such a varied collection of Gandhāra sculptures (pl. LXXXVI B), recovered from sites like Taxila, Jamalgarhi, Sahribahlol, Takhri-Bahi, Peshawar, the Swat valley and Charsada. Some masterpieces from Khajuraho (pl. XCIII) and of Pāla art (pl. XCII V) are exhibited in its medieval sculpture gallery. This Museum is also one of the richest repositories of Indian coins in the world and includes many rare issues. Of the reliquaires, themost important is a vase from Piprahwa, the inscription on which is datable to the fourth century B.C.

SALARJANG MUSEUM, HYDERABAD (1951).-This Museum owed its origin to the life-long mission of Mir Yusuf Ali Khan, the last of the illustrious Salarjang family of Hyderabad, to acquire curios from different parts of the globe. At present this is the largest museum in India of medieval and modern arts and crafts: it houses also a collection of toys and dolls exclusively meant for children. No less important is its collection of manuscripts, which include many an illuminated Ouran and beautifully-illustrated classical works by eminent poets. An emerald and rubydagger of Nuriahan, a dagger encrusted with diamonds, rubies and emeralds belonging to Jahangir and equally attractive swords and daggers of Shahjahan, Aurangzeb, etc., are some of the unrivalled exhibits in its arms-collection. Some pieces of furniture associated with Louis XIV and Louis XV have also found their way into this Museum.

NATIONAL MUSEUMOF INDIA, NEW DELHI (1949).

—The Museum is rich in protohistoric materials recovered from sites like Harappa, Mohenjo-daro, Jhukar, Jhangar, Amri, Nal, etc. Sculptures, ranging in date from the time of Asoka to the late medieval period, include quite a number of remarkable pieces

of Indian art, viz., standing Buddha, bathing woman (pl. LXXXVI C) and a Bacchanalian scene from Mathura and a vidyādhara couple from Aihole (pl. XCIB), etc. Other important collections include terracottas from the Indus valley sites, Ahichchhatra, Kauśāmbī, Kondapur, Nālandā, etc., besides textiles and Persian and Arabic manuscripts. The figures of Gangā (pl. LXXXIX) and Yamunā from Ahichchhatra, the largest terracotta sculptures in India, are in this Museum. The bronzes include a few superh Chola pieces as well as those representing the medieval eastern school; the dancing girl from Mohenjo-daro is on the view here. It has a very rich collection of paintings, particularly strong in the Raiput and Pahari schools. The magnificent collection of the Central Asian Antiquities Museum, including the famous wall-paintings, has now been transferred to this Museum by the Archaeological Survey of India.

B. STATE MUSEUMS

RAJPUTANA MUSEUM, AJMER (1908).—This is one of the oldest archaeological museums in Rajasthan. The important exhibits here comprise Brahmanical and Jaina sculptures, stone and copperplate inscriptions, coins and Rajput paintings.

GOVERNMENT MUSLUM, BÁNGÁLORE (1866).— The archaeological collection mainly consists of Hoysala sculptures from Halebid and Belur. Antiquities from Brahmagiri and Chandravalli are also seen here, in addition to coins of Mysore rulers.

BARODA MUSICIM AND PICTURE-GALLERY, BARODA (1894).—The Museum, the largest and the most important in Gujarat, displays in its Archaeological Section objects from the Harappan times to the fifteenth century A.D.; of the collection of bronzes, the mātrikās of Idar and the Jaina bronzes from Akota (pl. XCII A)

are noteworthy. The collection of Indian paintings representing different schools and the international sections are of great attraction to visitors.

ORISSA STATE MUSEUM, BHUBANESWAR1 (1932) .-Prehistoric tools, stone and metal sculptures, palmleaf manuscripts, wood-carvings, etc., mainly recov-

ered from Orissa, are exhibited here.

BHURI SINGH MUSEUM, CHAMBA (1908),-The Museum, started by Raja Bhuri Singh with an idea of preserving the ancient relics pertaining to the history of the then Chamba State, houses archaeological objects like sculptures, stone and copper-plate inscriptions, sculptured fountain-stones, wood-carvings, historical documents and a large number of paintings.

STATE MUSEUM, DHUBELA2 (1937).-Jaina images of Tirthankars, yakshas and yakshis and a group of Devi images form Gurgi, etc., form important collections of its sculpture-gallery. Noteworthy in its epigraphical collections are inscriptions of the Kushan and Gupta periods, early copper-plate grants and several Kalachuri records.

STATE MUSEUM, GAUHATI (1940).-The principal attractions of this Museum are stone and metal sculptures, inscriptions including two charters of Bhāskaravarman (seventh century) and Assamese

manuscripts written on thin barks.

ARCHAEOLOGICAL MUSEUM, GWALIOR (1922).-The sculptures of this Museum, covering a period from the third century B.C. to the seventeenth century A.D., include many outstanding specimens of Indian art like the palm-capital from Besnagar, panel depicting dance-scene (pl. XCI A) and terracotta heads from Pawaya, the lion-capital from Udaigiri, Manibhadra

¹ Originally at Cuttack.

Originally at Rewa.

yaksha and the mother-and-child from Badoh. An inscription of Kumāragupta is an important exhibit. Apart from the collection of Rajput and Mughal paintings, it has fine copies of the wall-paintings of

the Bagh caves.

Hyderabad Museum, Hyderabad (1930).—
Sculptures dating from the Satavahana period (first-second century) to the time of the Kakatiyas (thirteenth century) are housed here. There are also fine collections of old arms and weapons and of Bidri Ware. The other important features of this Museum are the copies of Ajanta and Ellorapaintings, manuscripts in Arabic and Persian and coins of the Yadavas, the Vijayanagara rulers, Mughals and of the Bahmani and other Deccan kingdoms. The prehistoric and protohistoric finds from Maski and other sites and results of the Maski and other sites of the Direction of Linds from Yelleswaram are housed in a separate pavilion, attached to the office of the Director of Archaeology.

CENTRAL MUSEUM, INDORE (1929).—It possesses a rare collection of manuscripts and ancient ornaments, besides inscriptions on stones and bricks as well as sculptures. Pottery from Kasrawadh with Mauryan

inscriptions on them is very interesting.

GÖVERNMENT CENTRAL MUSEUM, JAIPUR (1876).— The archaeological adjunct of the Museum contains excavated finds from Bairat, Sambhar and Rairh; other objects of interest are yupa-stambhas from Barnala and sculptures from Abancri and Amber.

DOGRA ART-GALLERY, JAMMU (1954).—The greatest attraction of this Museum is its collection of more than four hundred Pahari paintings. It has also a fine collection of historic arms, textiles and manucripts including the Shān-nāma, exticated the statement of the

STATE MUSEUM, LUCKNOW (1863).—The Archaeological section of this Museum includes Brahmanical,

Buddhist and Jaina images from various sites of Uttar Pradesh, of which the Jaina sculptures from Kankalitīlā, Mathura, and the Rāmā yana-tablets from Saheth-Maheth occupy a place of distinction. Its numismatic collection is rich in the punch-marked, Gupta and Mughal series. Equally rich are its collections of

paintings and manuscripts.

GOVERNMENT MUSEUM AND NATIONAL ART-GALLERY, MADRAS (1851).-In the collection of the specimens of plastic art and metal sculptures the Archaeological Section of this Museum holds definitely a pre-eminent position. The bas-reliefs from Amaravati, Goli and other Buddhist sites in the Krishna valley, Jaina antiquities from Danavulapadu and sculptures and architectural pieces of the Pallava, Chola and other later periods form invaluable collections of this Museum. But nothing can parallel its large and varied collection of south Indian bronzesthe richest in the world. The images of dancing Siva. including the world-famous Nataraia of Tiruvelangadu (pl. XCVI), occupy a singular position; equally prominent are the excellent Saivite (pl. XC), Vaishnavite, Jaina and Buddhist metal images collected from different parts of south India. Also there is an enormous collection of copper-plate charters issued by south Indian rulers. Of immense importance are the protohistoric antiquities from Adichanallur, Perumbair and other megalithic sites and also the unique Bruce Foote collection of stone implements, purchased by the Museum in 1904.

MUSEUM OF ARCHAEOLOGY, MATHURA (1863).-Sculptures mostly in red sandstone, collected from Mathura and its neighbourhood and comprising royal statues, including those of Vima Kadphises, Kanishka, Chashtana, etc., and Brahmanical, Buddhist and Jaina images, mostly datable to the Kushan period.

are the proud possession of this Museum. In fact, this Museum 'ranks foremost for the study of history and art of the Kushan period'. It has a rich collection of terracottas dating from Mauryan to the medieval times.

CENTRAL MUSEUM, NAGPUR (1863)—The Archaeological Section contains antiquities ranging from the Early Stone Age to medieval times; they form an indispensable source for the reconstruction of the history of the region. There are stone and copper-plate inscriptions of the Chāļukyas, Kalachuris of Tripuri, Ratanpur and Raipur and of the Vākāṭakas and the Rashṭrakutas, besides sculptures and metal images. The Mughal and Bhonsla paintings and a Babylonian cylinder-seal of about 2000 B.C. found at an unknown site in India are also noteworthy.

GOVERNMENT MUSEUM, PATIALA (1947).—A collection of Gandhāra sculptures and Brāhmaṇical and Jaina antiquities, ın addıtion to a collection of Pahari paintings, form the notable exhibits in this Museum.

PATNA MUSEUM, PATNA (1917).-It has a splendid collection of sculptures comprising the famous Didargani vakshi, a polished lion-head from Masarh and the two Jama torsos of Tirthankars from Lohanipur, all the four of Mauryan age, besides examples of Sunga, Gupta and Pala art, the last-mentioned series including one of the earliest dated images of the time of Devapala (ninth century). A large number of bronzes of Pala and Sena periods, including the treasure-trove bronzes from Kurkihar (pl. XCII B), have considerably enriched the Museum-collection. It is also rich in terracottas collected from places like Pătaliputra, Buxar, Mathura, Kauśāmbī, Bhita, Raigir, Vaiśālī, etc. Another important group of finds comprises ringstones carved with fertility-designs from Pataliputra. Stone and Copper Age implements from different

parts of Bihar are also on show here. No less significant is its collection of Tibetan banners and coins, particularly punch-marked ones.

MAHANT GHASIDAS MEMORIAL MUSEUM, ÆIPUR (1875).—It has interesting post-Gupta and Kalachuri sculptures, a small collection of Buddhist bronzes from Sirpur (seventh-eighth century), an inscribed wooden pillar from Kırari (second centery) and copper-plates of the Sarabhapuriyas, Somavamsis and Kalachuris of Dakshina-Kosala.

SRI PRATAP SINGH GOVERNMENT MUSEUM, SRI-NAGAR (1898).—The Archaeological Section of the Museum displays sculptures ranging from the fifth to the fifteenth centuries and coins of Indo-Bactrian, Indo-Scythian, Kushan, and Gupta and other kings. A special attraction of this Museum is its collection of about three hundred paintings, mostly of the Kangra school, and textiles.

ÄRCHAIOLOGICAL MUSEUM AND PICTURE-GALLERY, TRICHUR (1938).—Amongst the archaeological exhibits noteworthy are the finds from the megalithic monuments of Cochin and mid-Kerala, some excavated finds showing Roman contacts, inscriptions dating from the tenth to the eighteenth centuries and woodcarving and metal images of circa eleventh century. Copies of more than one hundred panels of mural paintings from the Mattancheri Palace, Cochin, and Vadakkunnathan temple, Trichur, are on view here.

C. LOCAL MUSEUMS UNDER THE ARCHAEOLOGICAL SURVEY OF INDIA

ARCHAEOLOGICAL MUSEUM, AMARAVATI (1951).— The Museum, which is at present only a sculptureshed, contains many pieces of carved architectural fragments of the stūpa as well as of its railing recovered

from the famous Buddhist site, which range in date from the second century B.C. to the third century A.D. The place of pride is occupied by a small group of limestone sculptures (pl. LXXXV B), unmistakably imprinted with Bharhut tradition. There are beautiful sculptures datable to the medieval period as well. A new museum-building is being constructed here.

ARCHAEOLOGICAL MUSEUM BUAPUR (1912).— The collection includes stone inscriptions in Arabic, Persian, Sanskrit and Kannada, Brahmanucal and Jaina sculptures, Arabic, Persian, and Urdu manuscripts, arms and weapons, chinaware, wood-carvings, maps and valuable ancient carpets, found at Bijapur and its neighbourhood.

ARCHAEOLOGICAL MUSEUM, BODH-GAYA (1956).—
The exhibits consist of stone and metal images, mostly of the Pala period. Two yakshis, datable to the first century B.C., are also on view here.

DELHI FORT MUSEUM, DELHI (1909).—Antiquities like inscriptions of the Sultanate and Mughal periods, arms, old documents like farmāns, sanads and maps, relics of the 1857-upheaval, carpets, manuscripts and specimens of calligraphy, dresses, etc., of the Mughal period are displayed in this Museum.

ARCHAEOLOGICÁL MUSEUM, HALEBID (1962).— Sculptures (pl. XCIV B) and architectural pieces of the Hoysala period form the collection in this open-air Museum at the site of the old Hoysala capital, which is full of temples.

ARCHAEOLOGICAL MUSEUM, HAMPI (1953).—Most of the sculptures and architectural pieces belong to the Vijayanagara period and were recovered from the site of the ancient capital of the Vijayanagara kings.

ARCHAEOLOGICAL MUSEUM, KHAJURAHO (1910).— About two thousand sculptures and architectural pieces representing three principal faiths, i.e. Buddhist

Brāhmaṇical and Jaina, all of the tenth to twelfth centuries, are on show in this open-air Museum. Some of them are masterpieces of medieval central Indian art.

ARCHAEOLOGICAL MUSEUM, KONDAPUR (1952).— The exhibits here include a rich collection of terracotta figurines, beads, pottery, etc., datable to the Jatavahana period. There is also a collection of Stone Age tools. Figurines made of kaolia are also on view.

FORT ST. GEORGE MUSEUM, MADRAS (1948).— The records and antiquities in the Museum offer scope for the study of the growth of Fort St. George, Madras, the first British settlement in India, in particular and early Indo-British history in general. There are arms, manuscripts, paintings, prints, coins, medals, textiles, porcelain, etc., of that period.

ARCHAEOLOGIĆAL MUSEUM, NAGARJUNAKONDA (1949).—Excavated materials from the Early Stone Age to medieval times are housed in two different buildings in the valley, which is now threatened with submergence as a result of the construction of a dam across the Krishna. A new museum-building on a safe hill-top is, however, now complete and will soon be thrown open. Sculptures (pl. LXXXVII) datable to the third-fourth century are the principal objects of attraction, though the museum is equally rich in many other classes of Indian antiquities. This is the only site in India where the important salvaged monuments have been reconstructed at places above submergence-level. The new Museum will be the first island-museum in India.

ARCHAEOLOGICAL MUSEUM, NĀLANDĀ (1917).— This Museum has a fine collection of stone and bronze images of the Buddhist gods and goddesses and a few images of the Hindu pantheon, all representing the Pala school of art at its best, found at the famous

Buddhist centre of Nālandā. The late Gupta period is represented by a few stucco heads. Inscriptions of the time of Yaśovarmadeva of the eighth and of Vipulaśrimtra of the twelfth century, sealings of royalties of the Gupta and Maukhari dynasties and numerous official sealings of the Nālandā monastery are some of the interesting features of this Museum. Some antiquities from Rajgir are exhibited here.

ARCHAEOLOGICAL MUSEUM, SANCHI (1919).—An Asokan lion-capital, fragments of gateway and railings, monastic and household utensils of iron, copper and bronze and also casts of a few relic-caskets, besides a number of carvings from the Mauryan to the medieval times, form the important antiquities here.

ARCHAEOLOGICAL MUSEUM, SARNATH (1904).—
Antiquities in this Museum represent the works of art of the Maurya, Sunga, Kushan, Gupta and medieval periods. The place of pride is occupied by the 2-m. high lion-capital of Asoka (pt. LXXXIII). A colossal standing Bodhisattva of the Mathura school belonging to the reign of Kanishka, some prize-pieces of Gupta and later art, like the images of Buddha (pl. LXXXVIII), the Bodhisattvas, etc., all in Chunar sandstone, are on view here.

TIPŪ SULTAN MUSEUM, SERINGAPATAM (1959).— Open to succeed with the history of Haidar 'Ali and Tipu Sultan and their contemporary history are housed in Tipū's summer-place of Dariya-Daulat-Bāgh.

D. Museums under corporate or civic bodies

ALLAHABAD MUSEUM, ALLAHABAD (1931).—Several pieces of the Bharbut railing, fragments from the Siva temple of Bhumara, sculptures from Khajuraho, Kausämbi and Mathura and also some of Gandhära school form the bulk of the sculpture-collection. Its terracotta

collection, mainly from K.usambi and Jhusi, is very important. Several remarkable issues of the Kausambi rulers are to be seen in the coin-cabinet. There are also excellent examples of Indo-Persian, Mughal and Raiput paintings 'the Mughal ones include some choicest pieces of the time of Akbar and Jahangir. The Pahari school is represented by a few fine puntings from Guler and Basohh.

PRINCE OF WALES MUSEUM OF WESTERN INDIA. BOMBAY (1921).—The fine collection of early sculptures of the Museum comprises examples of Gandhara and Amaravati art, terracottas from Mirpurkhas in Sind and sculptures of Chalukvan and Rashtrakūta periods. Its rich numismatic collection is well-known and the inscriptions in possession of the Museum range in date from the Asokan to the medieval period. The copper-plate grants of the Valabhi dynasty of Kathiawar form an important group. Recently an Asokan inscription in Kharoshthi engraved on a bowl has been acquired by the Museum. The prehistoric and proto-historic collections include exhibits like Early Stone Age implements from Cuddapah and neoliths from Amaravati. Perumbair and District. The non-Indian section of the Museum is highly interesting. The collection of Indian miniature paintings in the Art Section is also particularly rich.

VICTORIA AND ALBERT MUSEUM, BOMBAY (1850).
—It is mainly an industrial and agricultural museum, but there is a good collection of eighteenth-century paintings of nava-grahas and ashta-dikpādas, a smal collection of paintings of the Mughal, Rajput and other schools, rāga-māda paintings of the Jaipur school and Persian and Jaina manuscriots.

VICTORIA MEMORIAL HALL MUSEUM, CALCUTTA (1906).—The collection is representative of the different phases of Indo-British history. There are busts, statues

and imposing paintings of British kings and queens. Warren Hastings, Cornwallis, Wellesley, Dalhousie, etc., and also portraits of Rudyard Kipling, Burke and Macaulay. The piano and the writing-desk of Queen Victoria are in this Museum.

F. MUSEUMS OF LEARNED SOCIETIES

ASIATIC SOCIETY MUSEUM, CALCUTTA (1784) .--The Society still possesses a precious and select collection of oil-paintings, besides stone and copperplate inscriptions, ranging from the third century B.C. to the eighteenth century A.D. The Bairat rockedict of Aśoka is exhibited here.

BANGIYA SAHITYA PARISHAD MUSEUM, CALCUTTA (1910).-It has several old manuscripts and valuable sculptures and bronzes of the Pala school. Articles used by literary celebrities form an interesting collection of the Museum.

KANNADA RESEARCH INSTITUTE MUSEUM, DHAR-WAR(1910).- A large collection of Buddhist, Brahmanical and Jaina images in stone and metal, inscriptions from Karnatak, coins and manuscripts form the important attraction of this Museum.

BHARATIYA ITIHASA SAMSODHAK MANDAL MUSEUM. POONA (1910).—The Museum has a notably large collection of documents and manuscripts, besides coins and paintings, all of historical and cultural importance, particularly to Maratha history. excavated material from Karad, North Satara, and surface-finds from Nasik are housed here.

F. UNIVERSITY MUSEUMS

Kauśāmbī Museum, University of Allahabad. ALLAHABAD (1952).—Antiquities excavated at Kausambi since 1949 are housed here. It has some inscriptions, coins and a large collection of sculptures.

DEPARTMENT OF ARCHAEOLOGY MUSEUM, MAHA-RAJA SAYAJIRAO UNIVERSITY, BARODA (1950).-The exhibits represent the result of explorations and excavations conducted by the Department in the

Guiarat area and the Narmada valley.

ASUTOSH MUSSUM OF INDIAN ART, UNIVERSITY OF CALCUTTA, CALCUTTA (1937),-Some of the material recovered in exacavtions at sites like Paharpur, Mahasthangarh, Baigram and Ranganiati and the full collection of antiquities from Bangarh and Chandraketugarh are to be seen in the Museum. has a large and varied collection of sculptures too of the Pala period, besides terracottas from early sites in West Bengal, Mathura and other places, bronzes, coins, miniatures from Nepal, palm-leaf manuscripts, inscriptions and wooden objects.

DECCAN COLLEGE POST-GRADUATE AND RESEARCH INSTITUTE MUSEUM, POONA (1939).—The Archaeological Museum was built up with the objects excavated by the Institute in Guiarat, the Deccan, Karnatak, Andhra Pradesh and Madhya Pradesh since 1941. It contains tools, skeletons and fossils of the Stone Ages. The excavated material from Navdatoli, Maheswar, Jorwe, Nasik, Nevasa, Ahar, etc., are exhibited here.

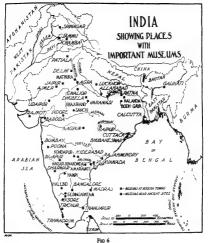
BHARAT KALA BHAVAN, HINDU UNIVERSITY, VARANASI (1950).-The Museum was originally a private collection, transferred to the University in 1950. The museum-collection covers Indian paintings, textiles, iewellery, coins, manuscripts, etc. Some outstanding examples of Indian art (pl. LXXXVI A) are to be seen here.

4. ACKNOWLEDGEMENTS

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The Museums of India (London, 1939). K.N. Puri's, 'Archaeological Museums' in Archaeology in India (Delhi, 1950) A. Ghosh's article entited, 'Fifty years of the Archaeological Survey of India', Ancient India. no. 9 (1953), and C. Sivaramurti's Directory of Museums in India (Delhi, 1959). The writer's thanks are due to these pioneers, some of whom are still intimately associated with the development of archaeological museums in India. Acknowledgments are due also to the authorities of some Museums for permission to publish photographs, respectively illustrated on pls. LXXXVI C. LXXXIX and XCI A (National Museum, New Delhi), XC and XCVI (Government Museum, Madras), XCII B (Patna Museum). LXXXVI A (Bharat Kala Bhayan, Varanasi), XCI A (Archaeological Museum, Gwalior), XCII A (Baroda Museum and Art-gallery, Baroda) and XCV (Art-gallery, Thaniavur).

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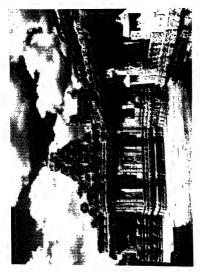






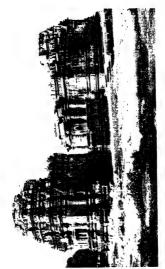
idimii Mālegitti-Svālava sec p 107

PLATE LX



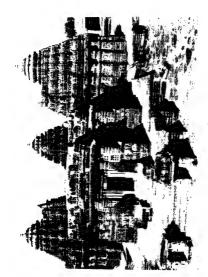
Paradkal Viripidksha te uple See p. 201

PLATE LXI

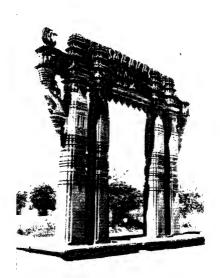


Lakkundı Kâšī Urvevana temple See p. 208

PLATE LXII



munition Learn tempt Seep 212



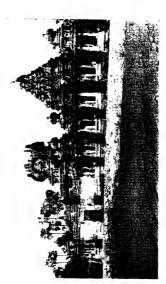
Warangal torana of a runned temple within fort See p. 213

PLATE LXIV

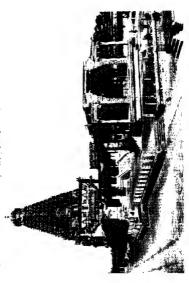


Mahabalipunam Shore-temple See p 215

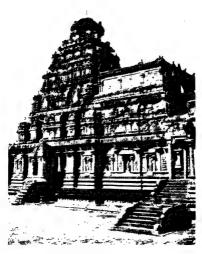
PLATE LXV



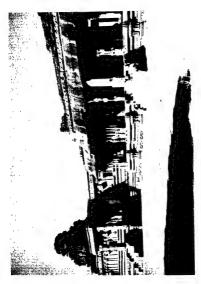
Kanchipinam Kadasanatha temple See p 217



Thanjavan Brihadisvara temple See n 229



Darasınanı Anāsatešsara temple Sec p 223



anny Unthala tempte Sec p 238

PLATE LXIX



Lellore gopinam See p 239



Stirangam façade-columns of mandapa with monolithic sculptures Sec p 239

PLATE LXXI



Delhi Quth-Minär See pp



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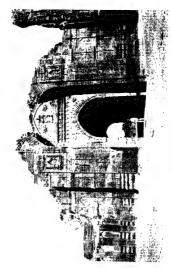
PLATE LXXIII





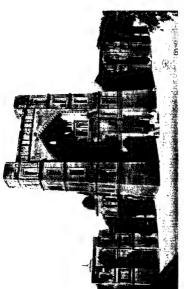
A, Narnaul Ibrāhīm Khān's tomb, B, Sasaram Sher Shāh's tomb See p 300

PLATE LXXIV

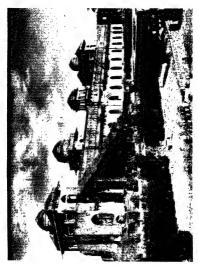


Garn Dálcht-Dannázu Ser p. 267

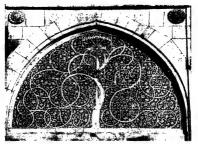
PLATE LXXV



Jampur Afāla-Masjid Sec p 270



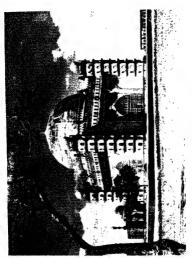
mdu Jahāz-Maḥal See p. 282



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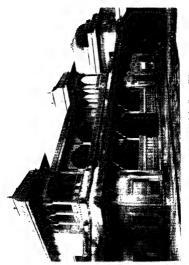


A, Ahmadahad a screen m Sidi Sa'id's mosque, B, Gulharga clossers of Jāmi-Masyud See pp 277 and 285



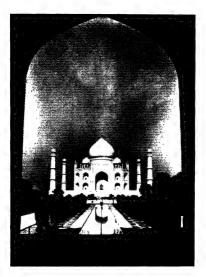
apu Gol-Gunthed See p 290







Fatchpur Sikri Jāmi - Maspd Baland-Darwāza Sec p 311



Agra Tāj-Mahal See p 317

PLATE LXXXII





A. Gwaliot fort, exterior v.ew. B. Chandragiri palace See pp 327



tichaeological Museum, Sainath hon-capital of Ašoka, Sarnath, third century B C See p 350

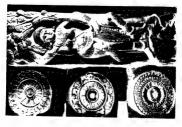


Indian Museum Calcutta (now in Rashirapati Bhasan New Delhi) bullcapital of Asoka Rampii wa third century B. C., See p. 340

PLATE EXXXV



Indian Aureum Calcutta xakshi on Bharbur radine second connux B C

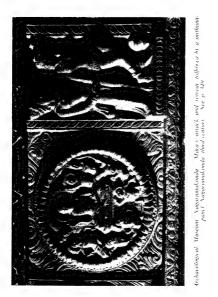






Delhe, hathing comp. Mattera second comm. See pp. 341 aleana Bralilla Gardrina school second comuni







Archaeological Museum Sarnath preaching Buddha Sarnath, fifth century See p. 350



National Museum, New Delhi-terracotta Gangā, Aliichchhatrā, sixthcentury See p. 342



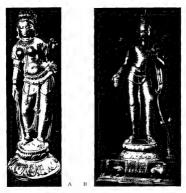
Government Museum Madras bronze Ushapaharana-Siva, Kilappuddanur, cighth century Sec p 345







PLATE XCII



A Baro la Museum, Baroda bronze churt-bearer (kota, seventh centur) B atna Museum Patna bronze (halokitessana, K. i. iao umih centur) See p 342 and 346



Indian Museum, Calcutta mother and child, Khajiraho, eleventh century See p 341





A Indian Museum Calcutta Karitikera Raphahi iwelith comin's B Wehacological Miceum Helebid Govardhanadhāri Helebid iwelith-thariconth comin's See pp. 331 and 348



Art-gallery Thamayan bronze Virshavahana and Devi Turwengadu, eleventh century See p. 340



Government Maseum Madras bronze Natarája, Travalangadu, eleventh centur Sec p. 345



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